Ex 1 – Plaintiffs' Supplemental Federal Rule Civil Procedure 26(a)(2)(C) Disclosures

Plaintiffs' Memorandum of Law in Opposition to Defendants' Motion to Exclude Undisclosed Expert Testimony from Non-Retained Expert Witnesses

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF WEST VIRGINIA

CITY OF HUNTINGTON, Plaintiff, v. AMERISOURCEBERGEN DRUG CORPORATION, *et al.*, Defendants.	Civil Action No. 3:17-cv-01362
CABELL COUNTY COMMISSION, Plaintiff, v. AMERISOURCEBERGEN DRUG CORPORATION, *et al.*, Defendants.	*Consolidated case:* Civil Action No. 3:17-01665 Hon. David A. Faber

PLAINTIFFS' SUPPLEMENTAL FEDERAL RULE CIVIL PROCEDURE 26(a)(2)(C) DISCLOSURES

Pursuant to Federal Rule of Civil Procedure 26, the City of Huntington and the Cabell County Commission, "Plaintiffs," hereby supplement their Federal Rule Civil Procedure 26(a)(2)(C) disclosures [*See* Dkt. 825]. As previously disclosed, the following witnesses are expected to testify as to their respective backgrounds, training and professional observations and experiences; these witnesses may offer both fact and expert testimony in accordance with the facts and opinions set forth in

their deposition testimony.[1] By providing this supplemental disclosure, Plaintiffs do not concede that the summary of the testimony implicates opinions required to be disclosed under Rule 26(a)(2)(A) as opposed to opinions governed by Federal Rule of Evidence 701.[2] The opinions are summarized as follows:

[1] These witnesses were initially disclosed on Plaintiffs' Preliminary Witness list filed on June 3, 2020 (Dkt. 503). Furthermore, the Defendants served subpoenas regarding all of these witnesses, either directly or through their employers. See e.g. Dkt. 340.1, 354.1, 449.1, 450.1, 903.1. Additionally, these witnesses were identified in the Plaintiffs' previous disclosures as witnesses that might be called as Fed. R. Civ. Pr. 26(a)(2)(C) witnesses. (See Dkt. 825 and 1055.1).

[2] Plaintiffs withdraw their identification of the following witness as Rule 26(a)(2)(C) witnesses: Hank Dial; Skip Holbrook; Robert Hansen, MS; Zachary Hansen, M.D.; Rocky Johnson; Scott Lemley; Jan Rader; Gordon Merry; Steve Murray; Connie Priddy; Chuck Zerkle; Allen Mock and Mitzi Payne. Plaintiffs may call these witnesses as fact witnesses and may seek opinion testimony from them that falls within Federal Rule of Evidence 701.

A. DAVID G. CHAFFIN, JR., M.D., FACOG

Dr. David Chaffin is a professor of obstetrics and gynecology and the director of maternal fetal medicine at Marshall University School of Medicine.[3] Dr. Chaffin has noticed a marked increase in the opiate addition in the areas since he joined the staff of Marshall in 1998.[4] Dr. Chaffin will present evidence and provide testimony on the subject matter of opioid addiction, and the opioid epidemic in Cabell County and the City of Huntington, based on his personal knowledge and experience, and in conformance with the facts and opinions expressed during his deposition, as summarized below:

- The commonality of opiate addiction as co-morbidity in pregnancy[5];
- Subutex is a reasonable treatment of opiate addiction[6];
- Observable shift seen via Maternal Addiction Recovery Center ("MARC") program in 2012 from mothers addicted to opiate pills to 2020, from mothers addicted to heroin[7];
- Patients who successfully complete MARC at the time of delivery are more likely to remain in a Medicaid Assisted Treatment program for the duration of the time they remain in MARC treatment[8]; and
- Prolonged use of opioids leads to an increased risk of addiction.[9]

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[3] *Id.* at 4. Dr. Chaffin is specially trained to provide treatment for high-risk pregnancies and has published on the prevalence of drug use among pregnant West Virginian patients. *Id.*

[4] Chaffin Depo. Tr. At 11:25-12:1, attached hereto as Ex. A.

[5] *Id.* at 103:3-19.

[6] *Id.* at 13:23-14:25.

[7] *Id.* at 94:14-23.

[8] *Id.* at 24:11-25:2.

[9] *Id.* at 93;16-25.

B. Todd Davies, PhD

Todd Davies, PhD is an Associate Professor and the Associate Director of Research and Development for the Division of Addiction Sciences in the Department of Family and Community Health at Marshall University's Jones C. Edwards School of Medicine.[10] He previously managed the Marshall Clinical Research Center, a hub for clinical trial activity at Marshall.[11] Todd Davies will present evidence and provide testimony regarding the opioid epidemic in Cabell County and the City of Huntington, including the incidence of overdose deaths, opioid use disorder, and neonatal abstinence syndrome locally, based on his personal knowledge and experience, consistent with the facts and opinions expressed during his deposition and in his September 15, 2020 Declaration, as summarized below:

- Based on "OUD Population at a Glance", there are 7,627 individuals that have been diagnosed with OUD by the Cabell Huntington Hospital or Marshall Health Clinics, with addresses filtered to identify residents of Cabell County and the City of Huntington, based on a Marshall Health database that Dr. Davies has access to which identifies patients with an OUD diagnosis or who have failed multiple drug screens[12];
- The opioid crisis has led to a rise in intravenous drug use, violent crimes, compromised health, negative economic impacts, an increase in behavioral health issues, health problems, and impacts on jobs and families in Huntington/Cabell County[13];
- The local area's Appalachian setting affects the opioid epidemic[14];

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[10] Davies Depo. Tr. at 6:22-7:2, attached as Ex. B.

[11] *Id.* at 12:5-22.

[12] *Id.* at 33:8-37:4, 108:23-119:5; Davies deposition, exhibit 11, "OUD Population at a Glance" (*see* Ex. B); and Declaration of Todd Davies, Ph.D. (*see* Ex. B).

[13] Ex. B., depo transcript at 50:17-52:4.

[14] *Id.* at 205:20-207:6.

- Huntington/Cabell County has experienced a dramatic increase in diseases related to drug use, such as endocarditis and hepatitis B and C, which are all known to increase with intravenous drug use[15];

- The number of opioid overdose deaths in Cabell County increased dramatically over time[16];

- NAS is a withdrawal syndrome that occurs shortly after birth due to the abrupt cessation of opioid delivery to the infant[17];

- The number of children born with NAS in the local area has increased dramatically, the rate of NAS births is higher than the national average, and NAS is a critical issue with the local opioid epidemic[18];

- NAS is related to harms such as physical and mental health problems in mothers[19];

- Whether prescribed by a physician or obtained illegally, opioid addiction is a serious public health issue, one which affects pregnant women and their infants[20];

- NAS babies require special care, including MAT, that goes beyond even what other NICU babies require[21];

- MAT is offered by local providers and is successful but needs to be expanded, along with a more robust behavioral health system[22];

- There is a need to rebuild social structures for individuals navigating through treatment and into long-term recovery in order to help them maintain their sobriety[23];

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[15] *Id.* at 55:13-56: 21.

[16] *Id.* at 113:8-16, 121:11-127:16.

[17] *Id.* at 104:5-105:7.

[18] *Id.* at 73:4-89:12, 103:2-16.

[19] *Id.* at 89:20-98:22.

[20] *Id.* at 104:5-105:7.

[21] *Id.* at 102:14- 107:9.

[22] *Id.* at 38:1-41:10, 60:20-62:1, 63:24-68:9.

[23] *Id.* at 67:1-68:12.

- Successful recovery requires a social system which individuals can rely on support from sponsors alongside a community who promotes healthy behaviors to maintain any achieved progress[24];
- Gathering information and conducting research about the local opioid epidemic, including collecting data on OUD, overdoses, and NAS, is critical to understand the epidemic and respond to it actively and effectively;[25] and
- Dr. Davies is involved with current ongoing research on opioids and NAS in the local community.[26]

[24] *Id.* at 67:13-68:12.

[25] *See, e.g., id.* at 83:23-84:25.

[26] *Id.* at 154:18-162:2.

C. Rahul Gupta, M.D., MPH, MBA, FACP

Dr. Rahul Gupta served as the commissioner and state health officer for West Virginia from 2015-2018.[27] Under his tenure and at his direction, Dr. Gupta ordered a number of reports, including a historical overview report tracking West Virginia's opioid crisis from 2000 to 2015 and a 2016 overdose fatality analysis in West Virginia.[28] Dr. Gupta will present evidence and provide testimony on the subject matter of opioid addiction, diversion, the nature of the opioid epidemic and its effects in Cabell County and the City of Huntington, based on his personal knowledge and experience, and in conformance with the facts and opinions expressed during his deposition, as summarized below:

- Opiate prescription drugs, their volume, and the consequential addiction and other diseases associated with OUD rose by thousands of percent over a decade[29];
- The amount of appropriate prescriptions was dwarfed by the amount of inappropriate prescriptions that were being diverted[30];

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[27] *See* Dkt. 1055-1, at 6. Dr. Gupta is a practicing internist with 25 years of clinical experience. *Id.* Dr. Gupta has authored more than 125 peer-reviewed scientific publications in medicine and public health and served as a principal investigator for numerous well-known clinical trials. *Id.* Dr. Gupta is a national and global leader in transforming public health practice to advance health equity and create healthier communities. *Id.* at 7. In 2017, Dr. Gupta was named West Virginian of the Year for his work towards battling the opioid epidemic by the Pulitzer prize-winning Charleston Gazette-Mail. *Id.*

[28] Gupta Depo. Tr. at 96:6-10, attached as Ex. C. *See also id.* at 182:7-183:14 (introducing the West Virginia Drug Overdose Deaths Historical Overview 2001-2015 report as exhibit); *See id* at 183:22-184:17 (introducing the 2016 West Virginia Overdose Fatality Analysis report as exhibit).

[29] *Id.* at 324:17-325:2.

[30] *Id.* at 150:12-151:5.

- There is a direct correlation between diverted prescription pills and the transition to using street drugs such as heroin, fentanyl, methamphetamine, etc.[31];
- Once an addiction is formed, an individual struggling with addition will obtain the addictive substance by any means necessary, which often results in illegal activity and the use of illegal substances[32];
- The IV drug use problem in Cabell County and the City of Huntington is an evolution of the prescription drug problem[33];
- The HIV outbreak in Cabell County, as a result of IV drug use, is the second largest in the nation's history[34];
- In Cabell County and the City of Huntington, the consequences of the oversupply and over-availability of prescription opioids has led to overdose deaths, and, more generally, communal suffering and devastating carnage[35];
- The opioid epidemic has led to an increase in the number of children entering the foster care system, rapidly increasing child welfare costs to the state[36];
- The opioid epidemic is a transgenerational crisis[37];
- Because of the overwhelming number of overdose deaths in 2015, there was a need in West Virginia for air-conditioned trailers to house the bodies of those who had overdosed[38];
- Although there was a 15-20% reduction in opioid prescriptions in 2015 and 2016, there was no reduction in overdose deaths because the addiction had already been formed, and people with opioid use disorder

[31] *Id.* at 166:4-13.

[32] *Id.* at 105:1-18.

[33] *Id.* at 161:14-165:18.

[34] *Id.* at 97:2-13.

[35] *Id.* at 22:5-24.

[36] *Id.* at 45:3-11.

[37] *Id.* at 44:22-45:24.

[38] *Id.* at 131:1-21.

were turning to illicit, more lethal forms to feed their addictions that was initially formed by prescription opioids[39];

- The increase in overdose deaths in West Virginia during that time was caused by the large volume of opioid pills that were originally deposited or delivered to West Virginia[40];
- In 2016, a significant amount of the people who died from an overdose had filled a prescription within 30 days prior to their death[41];
- Of the people who were incarcerated, released and subsequently died, the majority died of an overdose[42];
- In 2016, it was found that those overdose decedents who went to three or more pharmacies to fill prescriptions were 70 times more likely to have died[43];
- Three out of the four people that died of an overdose in 2016 tried to seek help within the year before their time of death[44];
- NAS babies are a causative issue in terms of the opioid epidemic[45];
- The overwhelming volume that was reaching the people of West Virginia was plainly involved in the killing of West Virginians every 12 hours around the clock[46];
- Addiction tells people to seek opioids in one form, shape or other[47];

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[39] *Id.* at 162:1-165:18.

[40] *Id.* at 167:24-168:8.

[41] *Id.* at 126:3-8.

[42] *Id.* at 126:3-14.

[43] *Id.* at 248:12-21.

[44] *Id.* at 126:9-14.

[45] *Id.* at 168:8-11.

[46] *Id.* at 43:6-11.

[47] *Id.* at 154:14-22.

- Chemically speaking, synthetic opioids, semi-synthetic opioids and prescription opioids work through the same receptors and feed the same need to the body[48];
- Children diagnosed with at birth have noticeable difficulties learning and paying attention[49]; and
- As children with NAS enter the classroom, there will be noticeable, interruptive and impulsive behavioral issues.[50]

D. Michael Kilkenny, M.D., MS

Dr. Michael Kilkenny is Board Certified in Family Practice and has worked in academic, hospital, and private practice settings.[51] Dr. Kilkenny has 16 years of experience as a medical director in the Community Health Center system and is currently the Physician Director of the Cabell-Huntington Health Department, serving Cabell County and the city of Huntington, WV.[52] Dr. Kilkenny was instrumental in the development of West Virginia's first local health sponsored harm reduction and syringe exchange program in 2015.[53] He has also published various articles concerning opioid injection use in West Virginia.

Dr. Kilkenny will present evidence and provide testimony on the subject matter of opioid addiction and the opioid epidemic in Cabell County and the City of

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[48] *Id.* at 176:18-177:19.

[49] *Id.* at 168:13- 172:22.

[50] *Id.* at 171:7-18.

[51] *See* 1055.1 at 11.

[52] *Id.*

[53] *Id.* Dr. Kilkenny currently serves on several advisory panels for the West Virginia Department of Health and Human Resources, Bureau for Public Health. *Id.* He is a member of the Harm Reduction Coalition and serves on the advisory panels for the Governor's Advisory Council on Substance Abuse, Prevention and Treatment. *Id.*

Huntington including testimony concerning health assessments and issues facing Cabell County and the City of Huntington as well as resource allocation needs for the improvement of health outcomes in the community. Such testimony will be provided based on his personal knowledge and experience, and in conformance with the facts and opinions expressed during his deposition, as summarized below:

- Opioids carry the risk of abuse, the risk of psychological addiction, and the potential to be chemically addictive;[54]
- The vast majority of injection drug users started as oral prescription drug users;[55]
- Intravenous Drug Injections is the primary cause of systemic and deep tissue infections, HIV risk, Hepatitis C risk and/or overdose deaths;[56]
- A failure of oversight and violation of laws regarding distribution contributed to Opioid epidemic in Cabell and Huntington;[57]
- Based on the data in Cabell County, from 2015-2017 overdose deaths rose;[58]
- Overdose deaths declined with the increase of naloxone distribution;[59] and
- There is still an opioid epidemic in Cabell County and the City of Huntington.[60]

[54] Kilkenny Depo at 99:4-99:6; 92:3-92:12, attached hereto as D.

[55] *Id.* at 75:14-75:16.

[56] *Id.* at 74:5-74:7.

[57] *Id.* at 119:16-119:21.

[58] *Id.* at 104:17-106:7.

[59] *Id.* at 104:17-106:7.

[60] *Id.* at 107:13-107:16.

E. Christina Mullins, M.A.

Christina Mullins serves as the Commissioner for the West Virginia Department of Health and Human Resources ("DHHR"), Bureau for Behavioral Health.[61] Christina Mullins will present evidence and provide testimony on the subject matter of the opioid epidemic in Cabell County and the City of Huntington, including opioid addiction and deaths, and the impacts on the community, based on her personal knowledge and experience, and in conformance with the facts and opinions expressed during her deposition, as summarized below:

- The opioid crisis is on-going, and we may see a rise in overdose deaths yet again[62];
- Prescription opioids had a significant impact on the overdose deaths in the state of West Virginia[63];
- Every county and community in West Virginia has been impacted by the opioid crisis, and will be able to document some level of need[64];
- There is an increase in prescribers utilizing MAT as well as those seeking treatment generally at comprehensive mental health centers[65]; and

[61] *See* 1055.1 at 12-13. She previously served as the Director of DHHR's Office of Maternal, Child and Family Health and worked in a variety of maternal and child health programs. *Id*. In her nearly 20-year tenure with DHHR, Commissioner Mullins has worked to establish West Virginia's youth anti-tobacco campaign, collaborated with a multitude of partners to launch a surveillance system for neonatal abstinence syndrome, and co-authored the 2016 West Virginia Overdose Fatality Analysis. *Id*.

[62] Mullins Depo. Tr. at 142:11-143:2, attached as Ex. E.

[63] *Id*. at 154:9-12.

[64] *Id*. at 141:1-10.

[65] *Id*. at 76:21-78:11.

- Long term financial resources will be needed to deal with these public health crises (HIV, mental health issues, etc.) in the future.[66]

- The opioid crisis impacts the ability for family units to stay intact and the downstream consequences of infant separation and foster care involvement are concerning. [67]

- The devastation of the opioid epidemic in the community, including trauma associated with children losing their families of origin due to substance use disorder and other unknown consequences will impact generations of families; The community will have to continue dealing with the mental health trauma among other residual effects of this crisis. [68]

F. Lyn O'Connell, PhD

Dr. O'Connell assists with Marshall Health's and the City of Huntington's response to the substance use crisis through clinical services, grant writing, research and program development, implementation and oversight.[69] In 2018, Dr. O'Connell was appointed the Associate Director of Community Services in the Department of Family and Community Health's Division of Addiction Sciences at the Marshall University Joan C. Edwards School of Medicine and Marshall Health.[70] In this position, Dr. O'Connell provides leadership to efforts to address substance use, and its underlying causes, within the community.[71]

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[66] *Id.* at 150:1-150:14.

[67] *Id.* at 145:17-146:7.

[68] Id. at 147:15-148:5.

[69] *See* 1055.1 at 13. She also works with the City of Huntington on the advisory board of the Compass Project to promote resiliency in first responders and as the primary investigator for the Huntington Quick Response Team ("QRT"). *Id.*

[70] *Id.*

[71] Dr. O'Connell also engages in teaching, research, and providing clinical services. *Id.* at 14. Dr. O'Connell previously served as the Clinical Director of the Marshall University Screening, Brief Intervention, and Referral to Treatment (SBIRT)

Dr. O'Connell will provide testimony regarding her extensive work within the community and with Marshall University as well as her work on the Resiliency plan and The City of Solutions. In addition, Dr. O'Connell will present evidence and provide testimony on the subject matter of the opioid epidemic in Cabell County and the City of Huntington, including opioid addiction, the negative effects on infants, barriers to recovery, and the effects of the epidemic on the community based on her personal knowledge and experience, and in conformance with the facts and opinions expressed during her deposition, as summarized below:

- In the City of Huntington and Cabell County, negative effects of infants who are born with substance exposure, diagnosed as either neonatal abstinence symptoms or neonatal withdrawal symptoms are evident[72];
- The necessary level of care and intervention for mothers overcoming SUD requires specific and tailored approaches[73];
- There are an overwhelming amount of barriers to women in recovery , including transportation, insurance costs, childcare, residential treatment and capacity[74];
- The opioid epidemic affects every individual who lives or works in the city and County and larger region as a result of the significant loss of human life, overdoses, the effect on the legal and housing system, health

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program. *Id*. She is also a member of the Marshall Substance Use Recovery Coalition, Healthy Connections Coalition, and chair of the Cabell County Substance Abuse Prevention Partnership. *Id*. She serves as chair of the Prevention Empowerment Partnership with United Way of the River Cities Program and is a member of the Marshall Substance Use Recovery Coalition as well as co-chair of the Healthy Connections Coalition. *Id*. Dr. O'Connell also serves as a member of the Faith Community United Steering Committee and an Advisory Board Member of the Bloomberg Compass Project for addressing compassion fatigue as a result of the opioid crisis. *Id*.

[72] O'Connell Depo. Tr. at 278:13-279:6, attached as Ex F.

[73] *Id*. at 63:19-64:14; 278:13-279:2.

[74] *Id*. at 280: 18- 281:19.

care system, first responders, the education system and financial standing of individuals within the community[75]; and

- There is a very short window to actively engage an individual with a substance use disorder.[76]

G. Stephen Petrany, M.D.

Stephen M. Petrany, M.D., is the chairman of the department of family and community health at the Joan C. Edwards School of Medicine, where has been a professor in the department and full-time faculty member since 1989.[77] Heavily involved with Ebenezer Medical Outreach, Dr. Petrany currently serves as its medical director and on its board of directors.[78] Dr. Petrany will provide testimony concerning components of the Resiliency plan, including the various needs of the community, research, education and engagement. He will also provide testimony with regard to opioid addiction in Cabell County and the City of Huntington and the relationship between prescription opioids and heroin use, based on his personal knowledge and experience, and in conformance with the facts and opinions expressed during his deposition, as summarized below:

- Many people who are now addicted to opioids turn to street drugs, such as heroin and others to satisfy their addiction; this often leads to overdose and death[79];

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[75] *Id.* at 277:24-278:12.

[76] *Id.* at 281:5-14.

[77] *See* 1055.1 at 14.

[78] *Id.* at 15. He is also the co-director and co-developer of the Paul Wesley Ambrose Health Policy Residency Track, the nation's first health policy track within a family medicine residency program. *Id.*

[79] Petrany Depo Tr. at 173:17-174:15, attached as Ex. G.

- It takes communication and collaboration for a community to effectually address and epidemic of this magnitude[80]; and
- In responding to the opioid epidemic, community based and supported plans make for better programs and more effective solutions. [81]

H. Kevin Yingling, RPh, M.D., FACP

Dr. Kevin Yingling is Chairman of the Board of Directors for Cabell Huntington Hospital and a member of the Board of Health for Cabell County.[82] Dr. Yingling has been a registered pharmacist since 1981 and a licensed physician since 1990.[83] Dr. Yingling will present evidence provide testimony on the subject matter of the opioid epidemic in Cabell County and the City of Huntington, including opioid addiction, diversion, the relationship between opioid use and illegal drug use, and the economic and community burden caused by the epidemic, based on his personal knowledge and experience, and in conformance with the facts and opinions expressed during his deposition, as summarized below:

- Opioids were diverted and used by individuals with opioid use disorder and for nonmedical use[84];
- There is biologic plausibility to the transference of addiction to opioids and opiates - synthetic or otherwise - that goes from an addiction to

[80] *Id.* at 74:-23-74:24.

[81] Id. at 126:2-128:7.

[82] *See* 1055.1 at 16.

[83] *Id.* He was founding dean of the Marshall University School of Pharmacy. Dr. Yingling is also an associate professor of medicine and pharmacology and served more than 10 years as chairman of the Department of Internal Medicine at the Joan C. Edwards School of Medicine. *Id.* Dr. Yingling is certified by the American Board of Internal Medicine. *Id.*

[84] Yingling Depo at 92:5-93:6, attached as Ex. H.

prescription opioids, to the use and abuse of other products such as heroin, fentanyl, carfentanil, etc.[85];

- The widespread availability of prescription opioids has led to the use of heroin and subsequent consequences from the burden addiction[86];
- Prescription opioid addiction and abuse is also a primary gateway for methamphetamine use in Cabell County[87];
- The loss of economic value to families, the tragedies, the psychosocial trauma, and other outcomes from the opioid epidemic will be borne out by this community for decades. This will be a generational burden for Cabell County and Huntington[88];
- There exists an economic and community burden for raising children who have been affected by the opioid epidemic. As a result of opioid, addiction, overdose and death, many children do not have families to raise them and will end up foster homes. As these children move into the primary education system, that burden will intensify[89]; and
- The addicted populations who are not in long-term recovery cause a great deal of the challenges for local law enforcement to face.[90]

[85] *Id.* at 148:21-149:6.

[86] *Id.* at 149:13-149:19.

[87] *Id.* at 150:11-150:15.

[88] *Id.* at 140:16-140:21.

[89] *Id.* at 141:9-141:18.

[90] *Id.* at 143:13-143:18.

Dated: October 30, 2020

Respectfully submitted,

THE CITY OF HUNTINGTON

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UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF WEST VIRGINIA

CITY OF HUNTINGTON, Plaintiff, v. AMERISOURCEBERGEN DRUG CORPORATION, *et al.*, Defendants.	Civil Action No. 3:17-cv-01362
CABELL COUNTY COMMISSION, Plaintiff, v. AMERISOURCEBERGEN DRUG CORPORATION, *et al.*, Defendants.	*Consolidated case:* Civil Action No. 3:17-01665 Hon. David A. Faber

CERTIFICATE OF SERVICE

I certify that on October 30, 2020, a copy of the **Certificate of Service** for **Plaintiffs' Supplemental Federal Rule Civil Procedure 26(a)(2)(c) Disclosures** was filed electronically. Notice of this filing will be sent to all parties by operation of the Court's electronic filing system. Parties may access this filing through the Court's system. Plaintiffs' Supplemental Federal Rule Civil Procedure 26(a)(2)(c) Disclosures will be served on all parties by email to: Track2OpioidDefendants@ReedSmith.com and MDL2804Discovery@motleyrice.com.

s/ Anthony J. Majestro
Anthony J. Majestro (WVSB 5165)

Ex A – Deposition Excerpts of David G. Chaffin, Jr., M.D., dated 07/29/2020

Plaintiffs' Supplemental Federal Rule Civil Procedure 26(a)(2)(C) Disclosures

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF WEST VIRGINIA

THE CITY OF HUNTINGTON, Plaintiff, vs. AMERISOURCEBERGEN DRUG CORPORATION, et al., Defendants.	)	Civil Action No. 3:17-01362
CABELL COUNTY COMMISSION, Plaintiff, vs. AMERISOURCEBERGEN DRUG CORPORATION, et al., Defendants.	)	Civil Action No. 3:17-01665

WEDNESDAY, JULY 29, 2020

HIGHLY CONFIDENTIAL - SUBJECT TO FURTHER CONFIDENTIALITY REVIEW

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Remote videotaped deposition of David G. Chaffin, Jr., M.D., held at the location of the witness in Huntington, West Virginia, commencing at 9:10 a.m., on the above date, before Carrie A. Campbell, Registered Diplomate Reporter and Certified Realtime Reporter.

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medicine in the Cabell-Huntington area, do you have an opinion within a reasonable degree of medical probability whether or not there exists a public health crisis in Cabell-Huntington in relationship to opioid use?

MS. RUSSO: Objection to form.

QUESTIONS BY MS. WILDE:

Q. You can answer.

MR. JONES: I'd like to briefly interject with perhaps not so much of an objection but an observation.

Dr. Chaffin is here as a fact witness. He's not a retained expert. To my knowledge, he's not been compensated as an expert of any testimony.

So I would direct him to answer this question and the line of questions to the extent that he has personal knowledge of the facts.

MS. WILDE: Yes. And if I didn't make that clear, that is what I want, Dr. Chaffin.

THE WITNESS: Okay. Has there

been a marked increase in opiate addiction since I joined the staff in 1998? And the answer is yes.

QUESTIONS BY MS. WILDE:

Q. And if you can, Dr. Chaffin, tell me a little bit about that.

When and what have you observed?

A. That's kind of broad. I'm not sure what you're asking.

Q. Sure.

You said that you had noticed a marked increase of opioid use and addiction.

When would you say that you began to notice, if you can pinpoint -- and if you can't, just give me a broad, general time frame. When did you start to see this or make these observations?

A. When I joined and probably the first four years of my tenure at Marshall, I would have between two and four patients in a methadone program per year.

And then early 2000s, we started to see an increase in the frequency, and it has been a steady increase since that

time.

Q. Do you still, Doctor -- again, based on your observations of the area, is there still an increase? Has it plateaued? It has it begun to decrease? Have you made any observations regarding that?

A. I have to qualify when I started a formal medication-assisted therapy program in 2012, and probably for four years after that there was still a steady increase.

I started the program because there was nobody else taking care of pregnant patients with opiate addiction. Now there are multiple, many providers.

And so what I can tell you, my observation is that in my practice, the number of people I have in my practice, has plateaued or slightly decreased. But I don't know what that means about the area incidence, because I no longer take care of everybody that has an opiate addiction, which I did at one time.

Q. In 2012, what was happening in Cabell-Huntington such that you felt the necessity to open medication --

methadone-assisted treatment?

A. It had become quite clear that Subutex was a very reasonable treatment for opiate addiction. There were no Subutex programs available to pregnant patients. Everybody that got pregnant was removed from whatever Subutex program they was in. So I was not able to find other people to take care of Subutex patients, and so I started that program.

Q. And obviously there was a medical need for it in the community at this point?

A. There were. We ran a steady census of 35 to 40 patients at all times for the first, oh, I don't know, six or eight years.

Q. And just to jump back a little bit, and that's in comparison to the two to four, I believe you said, when you first started there in 1998?

A. Yes. Two to four per year, total. And so realize that 30 -- 35 to 40 patients was -- they would deliver; we'd immediately fill the program back.

MARC would ask.

Since that time, it has been less an important aspect. And so for the last seven years or so or six years, five to six years, we haven't -- we haven't pursued how they got started.

Q. And this is just a -- my own edification. Does it matter for purposes of treatment?

A. No.

Q. All right. Do these programs work? Does MARC work?

A. You have to define what "work" means.

So if you ask do we have less use of street drugs and risky behavior, the answer is yes.

If somebody is -- comes through the MARC, is successful in the MARC, the baby is born with Subutex on board, the withdrawal period, the time needed to treat, is shorter.

Patients who successfully complete MARC at the time of delivery are more likely to remain in a medication-assisted treatment program for the duration

of the time that I know about, which is six weeks postpartum.

Q. Are there programs for the -- after the six weeks postpartum that you're familiar with, that for the --

A. Yes.

Q. Yeah.

Tell me about those, please.

A. So Cabell-Huntington runs one for patients postpartum as well as patients who come in unattached and not on any other program. And it runs -- I think it's 100 days postpartum. And then, of course, there's PROACT.

Q. Do you know the name of the first one, the 100 days postpartum?

A. Yeah, but you're going to ask me what the acronym means, and I can't remember. But we call it the MOMS program.

Q. Okay. Again, and it's -- you're going to tell me it's according to how I define successful, so let me ask you, Dr. Chaffin: Based on your experience and your observations, are those programs successful? Are they reducing the harm to

pills came from. You don't know if those pills were from a prescription or from the street or from a friend's drug cabinet, correct?

A. Correct.

Q. And there's also opioids that are completely street drugs, like heroin, correct?

A. Correct.

Q. And you agree that as a physician who prescribes opioids, that there are benefits and risks that you weigh when making a determination whether or not to write an individual prescription?

A. Yes.

Q. And are you aware of the risks associated with opioid use?

A. Yes.

Q. And what are those risks?

A. Obviously everybody has a potential for allergic reaction. There's oversedation and problems associated with that. There's a risk of overdose with respiratory depression and, with prolonged lose, the risk of addiction.

Q. And you believe that opioids continue to have a legitimate medical use today?

A. Yes.

Q. And you believe that opioids can be safe and effective treatment for long-term pain if a patient takes it in accordance with a doctor's prescription?

A. Yes.

Q. Did you say yes?

A. Yes.

Q. Okay. Sorry, you dropped off a little bit.

What is your understanding of the opioids that are being used in Cabell County today?

A. I can't speak for the county. In my practice, 90 percent of the patients are abusing heroin. Of the opiate use patients.

Q. And then in 2012, 90 percent of your patients were addicted to opioid pills?

A. Correct.

Q. And we don't know the source of those opioid pills?

Bates 193, part of your biographical sketch.

A. Uh-huh.

Q. Would you have written this document?

A. I did.

Q. Okay. So it was accurate at the time you drafted it?

A. Yes.

Q. And so this would have been in 2017. Would you have made sure that the personal statement was accurate as of 2017?

A. Yes.

Q. And so it says here, "Over the last seven to eight years, West Virginia has been dealing with an ever-accelerating epidemic of opiate use disorder, and opiate addiction has become the single-most common comorbidity in pregnancy."

A. Correct.

Q. Did I read that correctly?

A. Yes.

Q. And then "in the hospital where I practice" --

And that's Cabell Huntington Hospital?

Ex B – Deposition Excerpts of Todd Davies, Ph.D., dated 07/28/2020

Plaintiffs' Supplemental Federal Rule Civil Procedure 26(a)(2)(C) Disclosures

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF WEST VIRGINIA

CITY OF HUNTINGTON,
WEST VIRGINIA,

Plaintiff,

vs. CASE NO. 3:17-cv-01362

AMERISOURCEBERGEN DRUG
CORPORATION, et al.,
Defendants.

CABELL COUNTY COMMISSION,
Plaintiff,
vs. CASE NO. 3:17-cv-01665
AMERISOURCEBERGEN DRUG
CORPORATION, et al.,

Defendants.

HIGHLY CONFIDENTIAL - SUBJECT TO FURTHER CONFIDENTIALITY REVIEW

WITNESS: TODD DAVIES, Ph.D.

The remote videotaped deposition of Todd Davies, Ph.D. was remotely taken before Janine N. Leroux, Stenographic Court Reporter on Tuesday, July 28, 2020, commencing at the approximate hour of 8:14 a.m. Said deposition was taken for purposes of discovery, for use at trial, or for such other purpose under the Federal Rules of Civil Procedure.

THE COURT REPORTER: Thank you.

THEREUPON:

TODD DAVIES, Ph.D.,

the witness, after being first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. BURNETT:

Q All right. Good morning, Dr. Davies.

A Good morning.

Q So my name is David Burnett. I'm appearing from Motley Rice on behalf of the Plaintiffs in this litigation. Thank you for appearing under strange circumstances.

This is my first time doing a remote deposition, but I think we've worked out the kinks, so hopefully this will all go smoothly. So we appreciate you being here, taking the time and appearing remotely.

Could you start by telling us your name, your full name and your current professional position?

A My name is Todd Davies. I'm an Associate Professor and the Associate Director of Research and Development in the Division of Addiction Sciences and the Department of Family

and Community Health at Marshall University's Joan C. Edwards School of Medicine.

Q Thank you.

Now, just briefly, I assume Joel told you about this, but just to run through very quickly a few background points. You understand that you are under oath today?

A I do understand that.

Q Okay. Are you represented by counsel today?

A I am. That's Mr. Jones.

Q Who is your -- who is your counsel?

A Mr. Jones.

Q Okay. Have you been deposed before?

A No, sir.

Q Okay. Well, we'll work together to make this as smooth as possible.

So you understand that you need to respond verbally, not by nodding your head, so that the court reporter can record your words as you speak them, correct?

A That makes sense, yes.

Q Okay. And if you need a break, just let me know. We can take a break whenever you need it, just not while a question is pending.

a minute if you need to to review this language.

A Okay.

Q Did you -- did you write this language?

A Did I write it? I did write it.

Q Okay. So is that -- is that a fair description of what your role was as Director of Research and -- Director of Research, Development and Translation?

A Yes. Yeah.

Q Okay. And you have had that role until a year and a half ago?

A Yes, sir.

Q And when did you start that role?

A I started that role April 2013.

Q Okay. Is that when you joined Marshall?

A Yes, sir.

Q Okay. So the first -- the first sentence says, "I direct and manage the Marshall Clinical Research Center, a newly developed hub for clinical trial activity at Marshall." Do you see that?

A I do.

Q When was that research center created?

A Well, I -- I and Todd Gress created it

right?

A Well, that's what they hired me for, so I would hope so.

Q Yeah. Okay.

So you -- you've mentioned some terms, so I'd like to ask you what is your definition of those terms just so we're all on the same page. What is opioid use disorder?

A So -- well opioid -- so opioid use disorder, I don't have the DSM-5 in front of me, but it's a specific disease diagnosis that involves use of opiates, dependence and then there's cravings on top of that. I don't remember the exact definition based on the DSM-5. That's probably the better place to get that definition. But when I say opioid use disorder, I'm talking about specific diagnoses.

The same in substance use disorder, right? There's a specific diagnosis, there's a -- there's a --

THE COURT REPORTER: Can you slow down a little bit? You're kind of getting me off track here.

THE WITNESS: Oh, I'm sorry.

THE COURT REPORTER: Sorry. I've got to

write it down, and it's rough sometimes.

Thank you.

THE WITNESS: Okay. I'll slow down.

THE COURT REPORTER: Thanks.

A So -- so opioid use disorder, substance use disorder, anything where it says use disorder, those are specific diagnoses, and they have -- and they have a definition of those.

We do -- when we do research and we pull somebody's information out of the medical record, if I say they have opioid use disorder, that means they have a specific diagnosis of opioid use disorder, unless I otherwise define it, right, within our -- within our -- our graphs or whatever we are doing.

So when we look at opioid use disorder, we may say, we're going to count, in this case opioid use disorder, as specific diagnosis of opioid use disorder, and we may include in that likely opioid use disorder in which they have, you know, a number of failed or non-compliant drug screens without the -- without a prescription of an opiate.

So it -- it depends project-to-project, but when I say opioid use disorder, generally

I mean the specifically diagnosed opioid use disorder.

Q Okay. What is the difference between opioid use disorder and substance use disorder?

A Well, opioid use disorder is a substance use disorder, so it's just a specific -- we're just specifically designing -- defining the chemical of dependency.

Q So substance use disorder is broader, correct?

A Yes.

Q So substance use disorder, could that involve any substance that is misused?

A Technically, yes.

Q And opioid use disorder, would that involve both prescription and illicit opioids?

A Yes.

Q You referred to a diagnosis for opioid use disorder. How is -- how is that diagnosed?

A There are specific criteria in -- in the DSM-5 code. It can be diagnosed by a physician, or it can be diagnosed by an appropriate licensed psychologist or therapist.

Q Do you know generally what criteria they -- they look at -- look at for such a

diagnosis?

A I'm not a clinician, so I'm not going to say. You're going to have to ask them.

Q Okay. That's fine.

You referred to likely diagnosis through failed drug tests. Can you explain that further?

A Well, some -- a lot of times we do that to try and look at, you know, what -- who may be missed in -- in the population. So if -- if we don't -- if we think maybe there's -- the population is being under-diagnosed, then we'll look at criteria that would trigger a -- a diagnosis based on specific criteria. So people who have numerous failed opioid drug screens but they -- they don't have a prescription for an opiate, clearly, there's a -- there's a misuse issue.

And then when you look at multiple steps, that means they are at high risk for opioid use disorder although they have not been specifically diagnosed with that.

Q So is it fair to say that the number of people that have been diagnosed with opioid use disorder is smaller than the total number of

people that have opioid use disorder?

A Based on the data that we've seen and, you know, the data that I looked at, I think that's likely.

Q And that's because not everyone is diagnosed by a doctor or a clinician?

A Not everyone is -- not everyone is diagnosed by the appropriate licensed professional.

Q Right. Okay. You referred to neonatal abstinence syndrome, what is -- what is that?

A So neonatal abstinence syndrome is a withdrawal symptomology from -- in newborn neonates that have been prenatally exposed, so they have been exposed to some sort of neuroactive substance in utero.

Typically, it's associated with -- with opiates, although that has been sort of reclassified into neonatal opiate withdrawal syndrome, NOWS, but it's -- it's that symptomology, it's that withdrawal symptomology, where the neonate shows dependence on a drug and whatever neuroactive substance and is then -- demonstrates withdrawal symptoms.

Q Okay. Thank you.

And you referred to MAT, or medically assisted treatment I believe is -- is the term, is that right?

A Medication-assisted treatment.

Q Right. What is medication-assisted treatment?

A So when you -- when you -- when folks are treated with addictions, so we look at the treatment, and the treatment is the psychosocial, it's -- it's the cognitive behavioral therapy. It's the, you know, recreation of healthy social systems. It's all of the behavior -- you know, opioid use disorder, substance use disorder are behavioral health issues. And so it's that behavioral health portion is the treatment.

Now, some folks have trouble stabilizing their dopamine system. So if you don't have a healthy dopamine system, then it -- it's hard to be receptive to cognitive behavioral therapy. There's the high -- you know, high level of relapse for -- for those individuals, and so what you have is either methadone or buprenorphine is used. They're opiates. They're -- methadone is an agonist/antagonist. Buprenorphine is a partial agonist/partial antagonist. Or you have

Vivitrol, which is an antagonist opioid therapy, that you use to help stabilize these patients in terms of their dopamine system, so the cognitive behavioral therapy is more effective.

Q Okay. So to summarize then, MAT is one way of addressing opioid use disorder?

A It's a pharmacologically-assisted treatment for opioid use disorder.

Q Right. In your opinion, is MAT effective in treating opioid use disorder?

A Well -- and, you know -- yeah.

MR. JONES: Before you move on, this isn't necessarily an objection but an observation. You know, Dr. Davies is here as a fact witness. He's not a retained expert.

MR. BURNETT: Yeah. Yeah.

MR. JONES: He's not here to opine on expert matters for trial purpose. So --

MR. BURNETT: Sure. That's fair.

MR. JONES: -- if you can, let's try and just keep it to fact matters to the best -- the best of our ability.

MR. BURNETT: That's fair. Yep.

BY MR. BURNETT:

Q Dr. Davies, are you familiar with local

MET resources in the Cabell Huntington area?

A I am fairly familiar, yes.

Q Just, you know, broadly speaking, what -- what are -- what are the main avenues to obtain MAT locally?

A Well, you've got PROACT, which is the -- which is a collaboration between Marshall Health and Valley Health where you get a buprenorphine MAT. There's the Huntington Comprehensive Treatment Center where you can get methadone or a buprenorphine MAT. I think both of them provide some Vivitrol. There's -- there's a couple of other agencies.

Recovery Point has just opened a behavioral health center where they provide Vivitrol-based medications, just the treatment. Those are the primary sources.

Prestera Center, we can't forget them. They're a licensed behavioral health center in -- in the community. They provide I think all three MAT depending on -- on the -- on the sources. Although their specialty is really the compound issues where people have multiple behavioral health issues.

Q Okay. And based on your understanding,

is it fair to say that those outlets need more resources so they are able to provide more care to more people?

A Well, I mean I'm not in their books, but they all say they do.

Q Right. Okay. So in addition to providing MAT, do those outlets also provide counseling and other forms of therapy?

A Of course. I mean that's -- you can't have MAT without counseling.

Q Right. Okay. Is it your view that there is an opioids epidemic in the Cabell Huntington area currently?

MS. RUSSO: Objection to form.

THE WITNESS: I don't know, what is that?

MR. JONES: Defense counsel objected to the form of the question, but you can answer the question.

THE WITNESS: Okay. Sorry.

A I just -- well, I mean it -- you have to -- first, you have to define what -- what epidemic is, right?

Q Sure.

A Is there a -- is there a -- a higher

A I do see it.
Q Is that consistent with your understanding of the local situation with regard to opioids?
MS. RUSSO: Objection to form.
A Okay. So -- I mean but that's -- that's my understanding, but my understanding comes from the same sources that are cited in this -- in this publication.
Q Sure. Okay.
THE COURT REPORTER: Mr. Burnett, could you read a little slower when you're reading, please.
MR. BURNETT: Yes, will do.
THE COURT REPORTER: Thanks.
BY MR. BURNETT:
Q The next paragraph starts: "This crisis, however, goes beyond overdoses." It continues: "The devastation from the opioid crisis extends to rising violent crimes, compromised health and negative economic impacts. About 10 percent or 12,000 residents of Cabell County, West Virginia, where Huntington and Amazon's customer service center is located, are intravenous drug users." Do you see that

language?

A I do.

Q And is that all consistent with your understanding as well?

A I think that's -- it's an accurate estimate, as accurate as you can get about the number of intravenous drug users and -- and clearly opioid use disorder and -- and substance use disorder does -- I mean is -- is fairly well-known to create increase in crimes, increase in violent crimes, increase in -- in associated health issues.

Q Okay. What are those associated health issues that are associated with opioid use disorder?

A Well, there's -- there's an increase in behavioral health issues that's been pretty well laid -- laid out in -- in the literature. We're still unclear what percentage of the population started with behavioral health issues and then became more severe with substance use and how many of them with behavioral health issues were created due to the substance use. That's -- that's really unclear. I don't think anybody has -- has vetted that out very well. It's one of those things we'd

like to know.

There's -- with intravenous drug use, obviously, there's -- there's a lot involved in things like endocarditis and -- and infections. There are nutritional issues, nutritional deprivation that happens with opioid use disorder.

And that's -- and then you have the behavioral aspects of it where you can have loss of job, loss of family. You know, we all depend very much on our social structure. Our -- our cognitive abilities are dependent on dopamine function in the prefrontal cortex, and all of that is inhibited, so it creates a bit of a cascade effect in -- in terms of their personal lives. And so just a matter of -- of the families breaking up and increased anxiety, increased depression, increased number of poor health behaviors, poor eating habits, all of that stems and is -- and is -- is pretty well-known to be potentiated through opioid use -- or opioid misuse, I should say.

Q Okay. So all of those behavioral and medical problems you just described arise from opioid use disorder?

A Depends on what you mean by arise.

addiction, typically opioid addiction.

Q I didn't ask this earlier, but how long have you lived in the area?

A Since April of 2013.

Q Okay. Do you live in Cabell County?

A I do not.

Q Where do you live?

A I live in Lawrence County, Ohio, which is an adjacent county.

Q Okay. Fair to say you spend a lot of time in the City of Huntington and Cabell County?

A That's fair to say, yeah.

Q Okay. All right. So turning back to the -- the document, the end of the paragraph that we were looking at says, "The community has experienced a dramatic increase in diseases related to drug use, such as bloodstream infections and Hepatitis C resulting in a healthcare community which struggles just to keep up with the volume of patient care."

"The Centers for Disease Control has also identified the area as at-risk for Hepatitis C and HIV outbreaks due to the opioid crisis with the second highest rate of Hepatitis C infections and highest rate of new Hepatitis B infections in

the nation."

A Uh-huh (affirmative).

Q Do you see that language?

A I do see that language.

Q And is that consistent with your understanding?

A The data is very supportive of that statement.

Q So it's fair to say that hepatitis and HIV -- well, or at least Hepatitis C and Hepatitis B, those infection rates are -- are on the extreme high end nationally, correct?

A I believe that to be accurate. I haven't looked at the Hep C numbers in a -- probably six months or so. But, yeah, that's -- I mean from what I know, that's very accurate.

Q Okay. And those numbers are related to intravenous drug use, correct?

A Hep C transmission, Hep B transmission, HIV transmission are all known to increase with intravenous drug use. Uh-huh (affirmative).

Q Okay. The next paragraph refers to: "Newborns suffering from neonatal abstinence syndrome, to children thrown into foster care, to adolescents and young adults increasingly turning

A Well, primarily, from what I understand, from what I've been told directly from people who are working in CPS and people who are working specifically in Child and Family, the primary reason for the children being moved into the foster care system is neglect associated with substance use disorder.

Q And you said that opioid use disorder is a subset of substance use disorder, correct?

A It's -- it's primarily. I mean when we look at the data and we look across the agencies where we collect data, the majority of individuals with substance use disorder are in fact opioid use disorder.

Q Okay.

A And then we had a lot of polysubstance. SO even those who started with amphetamine use disorder now have both amphetamine use disorder and opioid use disorder and vice versa.

Q Okay. So a -- a lot of children that go into foster care, you're saying that's because there is neglect related to opioid use disorder?

A That's true.

Q Okay. And for some of those children, their parents have also passed away from opioid

overdoses, correct?

A Some of them. I -- I can't tell you what percentage.

Q Sure. And for some of them, their parents may be incarcerated related to their opioid use, correct?

A They may -- they may have died of overdose. They may be incarcerated. They may just not be emotionally available, right? They may -- they may just be neglectful because they're more -- they're consumed within that opioid use disorder and within those -- those cravings, and they haven't been able to -- we haven't been able to get them into a treatment program yet where they can start rebuilding their life.

Q Okay. And that's because those treatment programs are -- are all fully booked up?

A Oh, every time we build a new treatment program, it fills up so...

Q So there is -- there is -- there is more demand for treatment locally than there are facilities to -- to address it?

A We are -- we are in the process of -- of measuring that exact thing, but preliminarily,

I would say, yes, for sure.

Q Okay.

THE VIDEOGRAPHER: Sorry for the interruption. This is the videographer. Can we take a break real quick?

MR. BURNETT: Yeah. We've been --

THE VIDEOGRAPHER: I just want to address --

MR. BURNETT: We've been going an hour and a half so this -- we can -- you know, if everyone wants, we can take a five or ten-minute break.

MS. RUSSO: Okay.

THE VIDEOGRAPHER: Going off the record. The time is 9:29 a.m.

(Thereupon, a break was taken.)

THE VIDEOGRAPHER: We're back on the record at 9:51 a.m.

MR. BURNETT: Moniqúe, can you bring back the document, the PROACT document that we were just looking at?

BY MR. BURNETT:

Q And I want to direct your attention, Dr. Davies, to the top of Page 3.

A All right.

Q So the first full sentence -- first full paragraph there next to the table -- or next to the image refers to, quote -- well, it says, quote: "The opioid epidemic is costing the State's economy an estimated 8.8 billion a year and 12 percent of the gross domestic product - a number that is more than double that of any other state. This equates to $4,793 per resident." Do you see that language?

A I do.

Q Is that consistent with your understanding that the opioid epidemic has had a serious economic impact on the State?

MS. RUSSO: Objection to form.

MR. JONES: I'm going to object to the -- I'm going to object to the form of the question as well.

A Yeah. I'm -- I'm not a health economist so -- you know, economies are multilayered things, so I think it would be better if you asked that question to somebody who does that for a living.

Q Sure. Understood.

Let's turn to Page 4, and the second full paragraph begins with the word, "One," and it

says: "One treatment method that has found success, however, is the utilization of medication-assisted treatment, or MAT, which combined with traditional and targeted therapies has shown positive results." Do you see that language?

A I do see that language.

Q Okay. And then just skipping ahead one more quote, at the bottom of that page, third line from the bottom it says: "In addition, there is a considerable unmet demand for medication-assisted treatment - a critical gap in treatment delivery." Do you see that language?

A Yes.

Q Okay. Is that consistent with what you were saying before about unmet demand for MAT locally?

MR. JONES: I'm going to object to the form of that question.

A Here's the thing about -- about treatment, right? So there are -- there are different approaches that work for different people.

Q Yeah.

A And MAT works for some people,

abstinence-based works better for some people.

There's -- there's -- it depends on what you mean by "success." Would -- with more MAT, do we get more people in treatment? Based on our experience here, based on what the data has shown us, yes. We're getting -- we get more people into treatment using MAT. But there's a -- there's an extended cost beyond that, the -- the therapy. Once -- once you've run your course and once you start somebody on buprenorphine, they are on buprenorphine typically, you know, on average, somewhere between two to five years. And then after that two to five years, there has to be -- you have to continue that treatment.

But when we say MAT treatment, we're not just talking about putting more -- putting more of these medications and making them available. That's part of it, yes, but you also need more therapists.

There's a -- there's a huge lack in the number of behavioral health professionals, and when you look at the pay lines of -- of Medicaid, it's hard to attract and keep people here to do those jobs and to build that -- to build the infrastructure that really creates a robust

behavioral health situation.

So medication-assisted is -- is part of it. It requires a lot of counseling and behavioral health treatment, but then you have the whole social system development. I mean you've got -- you -- you have a community here that is dependent very largely on its family interactions. Those family interactions have become unhealthy because of this, you know, because of the -- the situation, and so you have to -- you're talking about rebuilding social structures.

It -- it -- yes. Medication-assisted treatment, does it need to be expanded? Probably a little bit. But all of the stuff that comes with it, all of the behavioral health system, all the social system building, that is a far more severe deficit when it comes to the -- the needs of the community in terms of addressing this widespread opioid use disorder and getting it to a point where the community is healthy again.

Q Okay. So when you say, you know, there's a severe deficit with regard to the behavioral health system and the social system, can you give examples of how that deficit manifests?

A Well, I mean for every -- for every physician -- like, well, just take MAT -- MAT for an example because that's where we started with. For every 15-minute physician visit one day a week, you have several hours of therapy that need to happen, right? And the -- the reimbursement rates for behavioral health for that hour are much lower than what you would see for that 15-minute physician visit, but -- but it's medication-assisted treatment, right? So treatment is actually the counseling. The treatment is the behavioral health issue.

When you look at the long-term effects, you know, the people who are able to get through treatment and into recovery and then finally to a point where they can self -- you know, where they can be active members of the community again and they can self-manage their disease state, as we've established earlier, then that requires rebuilding their social structures, and so they need a social system that is healthy, and they need people they can rely on. They need sponsors. They need to be able to put healthy individuals around them again. And -- and that gets to the point of where they are -- as I said before when you look at it

neuro-biologically, where they're making decisions back in their prefrontal cortex. They have a healthy dopamine system functioning, and that takes -- that takes time, that takes a lot of support, not only at the -- at the small social system level but at a community level so that those individuals then can be supported throughout their entire journey into recovery and then into a point of self-management of care.

Q So when you talked about the brain just there, you're talking about the effects of opioid use disorder medically on people's brains?

A Yes.

Q Okay. So those medical effects on people arising from opioid use disorder lead to all these other social problems?

A Well, they're clearly -- they're clearly linked. I mean the literature is -- is fairly comprehensive on that.

Q And opioid use disorder, I believe you said, affects not only those people that are directly -- that have opioid use disorder but the whole community, right?

A Once -- once it gets to the -- once you get to a level where every family -- and, again,

Exhibit 5.

MR. BURNETT: Okay.

(EXHIBITS 4 AND 5 WERE MARKED.)

MR. BURNETT: Okay. So Exhibit 4 is a one-page cover page. It just says, "This document produced natively." The Bates number on that is Marshall-Health-2227.

And then Tab -- Exhibit 5 is the native version of that document.

BY MR. BURNETT:

Q So, Dr. Davies, what this means is that in the production that was made by Marshall Health, we received the PDF and then attached to it was the spreadsheet.

A Okay.

Q Do you have those two pages in front of you?

A I have, yeah, the -- the document produced natively and then the print-out of the Excel sheet, yes.

Q Right. Okay. All right. So just focusing on the -- the Excel spreadsheet, do you recognize this document?

A Yes.

Q What is it?

A This is a -- these are the -- the number of -- and each -- well each column is a little bit different, but exposed, NAS children numbers from Cabell Huntington Hospital that was assembled by -- by me and my staff.

Q Okay. So you and your staff prepared this document?

A Yes.

Q And all of the data in this comes from Cabell Huntington Hospital?

A Yes.

Q Okay. So there's no data from St. Mary's hospital here?

A There's no data from St. Mary's hospital. We don't have access to that. They see -- they see less prenatally-exposed babies. I know that.

They are also kids born at King's Daughters across the river in -- in Kentucky from -- you know, from the area and -- and even some will all of the way go out -- go out to Southern -- Southern Ohio Medical Center in Scioto County, Ohio.

But by -- by and large, Cabell has the largest number of NAS or prenatally-exposed

births.

Q Okay. So you referred to King's Daughters in Kentucky and other medical facilities in Southern Ohio.

A Uh-huh (affirmative).

Q So you're saying some -- some people that live in Cabell County or the City of Huntington seek medical care in those other states or those other hospitals?

A Yes.

Q Okay. So this -- this spreadsheet then doesn't show the full number of babies born with NAS of mothers that live in Cabell or Huntington, correct?

A That is correct.

Q Okay. And so if we added in the numbers from St. Mary's, that would increase these numbers, right?

A They would.

Q And if we added in the numbers from women that live in Cabell or Huntington but went to another hospital outside of Cabell or Huntington, the NAS numbers would also increase, right?

A Yes.

Q Okay. In the columns -- if you look in the upper left in parenthesis the titles of the columns say: "Huntington Area." Do you see that?

A Right.

Q And then in the three columns below that it says in parenthesis: "All CHH." Do you see that?

A Yes.

Q What is that distinction there?

A So when it says Huntington area, what that is -- those individuals during the birth visit reported a residency within Huntington and Cabell County.

On all births -- that's all of the births that have come to -- to Cabell Huntington Hospital, this is -- it's a regional hospital. So even though those -- those individuals, those moms and their babies don't necessarily live in Cabell County, they may live in Lawrence County, Ohio, they may live in Logan County, they may live in -- you know, further out in Wayne County, they still come here for -- to give birth because this is the -- the largest hospital, the best equipped to deal with neonatal abstinence syndrome.

Q Largest hospital and best equipped,

what, in the Tri-State area?

A In the -- in the Tri-State area, yeah. But it's -- it goes beyond that. I mean we have -- we have moms drive up from McDowell County just to give birth here because of -- in order to get better care for their -- their baby when they're, like I said, prenatally exposed.

And many of those are moms that are usually in a -- a program when they are pregnant, so they at a better place when they give birth to make that decision.

Q Okay. Where is McDowell County?

A McDowell County is about -- well, about three-hours south if you -- if you drive. It's the very --

Q Is that in West Virginia?

A -- southern tip of West Virginia.

Q Okay. All right. So the numbers --

A We're talking about 300 miles.

Q Okay. Understood.

So the numbers in the upper left columns, the first row that say "Huntington Area," those are a subset of the numbers for all CHH?

A Say that again. You broke up a little bit.

Q Sure. The numbers in the top row of the spread -- of tables, upper left, that say "Huntington Area" --

A Uh-huh (affirmative).

Q -- those Huntington area numbers are a subset of all the CHH numbers directly below them, right?

A Yes.

Q Okay. How did you compile this data?

A We have a -- we have a data warehouse where we can -- we can pull data from the -- this data comes directly from the -- Cabell's electronic health record via data warehouse, and we pull things from the back end, reassemble it in the data warehouse, validate the data and then produce these results.

Q Okay. So is the data coming from the hospital?

A The data is coming from the hospital. It's coming -- it's pulled from the hospital's electronic health record.

Q Okay. So in other words, when a woman comes in and is diagnosed -- well, when a woman comes in and their baby is diagnosed with NAS, that's recorded in the hospital system somehow?

A Yes.

Q And then you get a copy of that, of the hospital's electronic records?

A Yes. That's the short version.

Q Right. Well, or -- so the hospital records go into the data warehouse, and then you get the data from that warehouse?

A Yes.

Q Okay. And that's all reliable data then, correct?

A Yeah. This is probably more reliable data because what we do, we go through a validation process with -- when it goes into the data warehouse, we do a validation process. So that the queries from the EHR will pull it directly. We'll take a statistical subset. We'll actually go in and read the record to make sure it's accurate.

Q Okay. And that validation process, is that something that is done in data gathering like this in other contexts?

A It should. Whether it's actually done is -- is a -- you know, if I don't do it, then I can't tell you whether or not it's done. It's supposed to be.

Q Okay. And that validation process, you've used that prior to this, correct?
A Yeah. That's our standard operating procedure.
Q And is that standard within academia or a standard within Marshall?
A It should be.
Q Okay. All right. So if we look at the top row, the Huntington area numbers, you've said that's for babies with NAS where the mother lives in Cabell or Huntington?
A At the birth visit, yes.
Q And the birth visit is after the baby -- baby is born?
A Well, it's -- it's the visit in which the birth happens, right? So when mom comes in and -- and she's -- and she's given the CPT code of live birth, right? That means that at some time once mom was put in the hospital, she gave birth, that's the birth visit.
Q Okay. The top left table says: "Exposed Births," and the one next to it says: "NAS births." Do you see that?
A Yes.
Q What is the difference between exposed

births and NAS births?

A Okay. So exposed birth means -- so the definition of NAS in West Virginia is proof of prenatal exposure and symptomatic of withdrawal. And different -- different physicians will -- will diagnose differently, right? So they're just -- I mean it's their prerogative as -- as physicians, so they'll diagnose NAS based on, you know, their interpretation of that West Virginia law.

That law did not take -- and that definition did not take effect until 2015, I think. So -- it may have been 2014.

So what we record here is exposed because we really don't know if the baby does not exhibit withdrawal symptoms and it was exposed, we still don't really know whether or not there are long-term detrimental effects. So that's -- that's something we're trying to study right now.

So if they were exposed, that means there is proof of prenatal exposure to a neuroactive substance. So the -- that neuroactive substance primarily -- it's primarily opiates, the -- the baby has been exposed to it. So we don't know long-term whether or not they're going to be cognitive or developmental delays just based

on exposure, whether or not they have withdrawal symptoms.

So then on the NAS column is they have had prenatal exposure, so those babies will be encompassed in the exposed numbers, and they have been symptomatic in terms of their withdrawal.

MR. BURNETT: Hold on. Let me -- let me just interrupt.

Moniqúe, can you please -- yeah, thanks. That was another screen that came up.

Q Okay. So -- so exposed births means there's proof of prenatal exposure, and NAS means there was proof of prenatal exposure plus withdrawal symptoms?

A In the neonate, yes.

Q Right. Okay. And NAS Births is a subset of exposed births?

A Yes.

Q And is it possible that all of the births that are exposed could have NAS?

A Well, by definition, no, they have to be diagnosed, right? If they are not diagnosed, then they, by definition, don't have NAS. But you have to remember, NAS is a withdrawal -- it's

neonatal abstinence syndrome. So when the -- the birth happens, they -- the baby then abstains from the prenatal exposure and has withdrawal symptoms.

It is possible that the detrimental effects that we associate -- the long-term detrimental effects that we associate with NAS, we don't know how much exposure creates those cognitive and behavioral delays that have -- that are in the literature.

So it is very possible that babies that are exposed but do not show withdrawal symptoms will still have those long-term detrimental effects in terms of cognitive and behavioral delays.

Plus, it clearly means that there is some sort of -- you know, that mom took or was -- you know, exposed the baby to neuroactive substances while she was pregnant.

So in terms of opioid use or -- or substance use, then that clearly happened in the exposed neonates whether or not they had withdrawal symptoms.

Q Okay. And this general topic of exposed births and NAS births, that's -- that's part of the research that you and Marshall more

broadly are conducting right now, correct?

A Yes.

Q And is that also the subject of ongoing grant applications?

A Yes.

Q Okay.

A It's a critical question. I mean we don't -- and we need to know what -- how much of the exposure causes it, how much is a social determinant. If we're going to -- if we're going to repair this thing, we have to have that research done.

Q Right. So in -- in order to understand how to address this problem of NAS and exposed births, you need to have data as a foundation of that work, is that fair to say?

A Yes.

Q Okay. And you're in the process of collecting and evaluating that data?

A Yes.

Q Okay. And what that data shows helps shape what sort of medical or social remedies might be best-suited to addressing this problem with NAS and exposed births, right?

A Oh, it's critical, yes.

Q Okay. So if we compare the columns that says: "NAS Births (Huntington Area)" and the one to right where says: "All Births (Huntington Area)," then that shows for each year from 2010 to 2020 how many children were born at Cabell Huntington Hospital where the mother was from Huntington or Cabell at the time of the birth visit, how many of them were diagnosed with NAS versus the total number of births during that time, correct?

A That is correct.

Q Okay. So if you look at 2014 under NAS births it says 108, and then under all births for 2014 it says 1,000. Do you see that?

A Yes.

Q So just doing the rough math, that means that in 2014 more than 10 percent of births in this category were NAS births?

A Were diagnosed NAS births.

Q Right.

A And then -- and then, what, over 20 -- 20 percent were proven to be exposed.

Q And with that, you're comparing the 223 number in the exposed births column to the 1,000 number in all births column?

A Yes.
Q Okay. And then for 2015 under exposed births it says 204, for NAS births it says 109 and all births it says 959. Do you see that?
A Yes.
Q So that means that in 2015, again, more than 10 percent of births were NAS births and more than 20 percent were exposed births, is that right?
A Yes.
Q Okay. And then for 2016, 225 exposed births, 98 NAS births and 908 total births. Do you see that?
A Yes.
Q And, again, percentage-wise that means that exposed births were more than 20 percent of total births, and NAS births were more than 10 percent of total births, correct?
A That's what that means, yep.
Q Those numbers are higher than national averages, right?
A Yes, by a significant amount.
Q Do you know how significant?
A I think the national -- the estimates for national average are -- are somewhere

between -- somewhere about a little bit lower than 3 percent the last time I checked.

Q Okay. Those -- the 3 percent, is -- is that current in 2020, or what year would that be for, do you know?

A I don't think we have a current number. I don't -- I don't think that -- I don't think there's 2020 current data available for the nationwide -- nationwide --

Q So the 3 percent that you referred to --

A -- not that I know of.

Q -- do you have a -- like a ballpark of what year that would be for?

A That number is probably from 2014.

Q Okay. So that would mean that in 2014, the local rate of NAS was three times the national average, at least?

A For diagnosed NAS, yeah.

Q And NAS, again, goes back to the mother's opioid use during pregnancy, right?

A Well, you -- you need an exposure, right, an in utero exposure, and then the baby would have to be symptomatic.

Q Right. The exposure, are we primarily

referring to opioids?

A Primarily.

Q Okay. In small type, in the upper left, it says: "91 percent of exposed births are a match with the mother." Do you know what that means?

A Yeah. EHRs are not designed to match patients. So in our -- in the Cabell EHR, the mother's and the baby's records aren't naturally matched, and so we've had to do it -- build an -- build algorithms and -- and do the matching within the data warehouse.

And so at the time that this was produced, that was our success rate in terms of 91 percent of baby's records that were exposed were matched with their mother's record in the -- in the data warehouse.

Q You referred to EHR, does that mean electronic health record?

A Yes.

Q Okay. And looking to the right of the column -- of the tables that we were talking about, upper right, there's one heading that says: "Exposed Births with Positive Maternal Opioid UDS up to 36 weeks before birth." Do you see that?

A Uh-huh (affirmative).
Q What does UDS refer to?
A A urine drug screen.
Q What is that?
A That is a -- a urine -- a drug toxicology that is taken at -- from -- from mom through her urine.
Q And is that how opioids are tested for?
A That's one way they are tested for.
Q Okay. Is that how Cabell Huntington Hospital tests for opioids, do you know?
A Typically, yes.
Q Okay. All right. And you can set that document aside, and if you could open Envelope 14.
MR. BURNETT: And, Moniqúe, if you could call this up, and I believe this will be Exhibit 6.
(EXHIBIT 6 WAS MARKED.)
BY MR. BURNETT:
Q Okay. So this is a copy of an article called: "History of postpartum depression as a contributor to the severity of NAS." It appears to be from a journal called Addictive Behaviors.
A Uh-huh (affirmative).
Q Volume 89, Pages 78 to 84. Do you --

do you have this document in front of you?

A I do.

Q And my printed copy is missing every other page, but the electronic copy that we're also looking at here on the screen share, that has every page.

A Okay.

Q Do you recognize this document?

A I do.

Q Okay. What is it?

A This is a -- a publication that my research team produced.

Q Okay. And you see your name listed at the top as one of the authors?

A I am the senior author.

Q Okay. And the other names listed here, they are your co-authors?

A The other -- yes.

Q Okay. And when you say senior author, did you write this document?

A My student -- I mean my student did the -- I'm primarily responsible for the data collection, the writing, all of the -- all of the document, but my -- my student did the first draft.

Q Okay. And when you say you're responsible for the data, so if we turn to Page 80, there's -- there's a bunch of data and some tables, Table 1 and Table 2. Do you see that?

A Yes.

Q Is that data that you or your team collected?

A That is, yep.

Q Okay. Feel free to look at the document if you need to refresh yourself, but what was the -- what was the subject of this article? What was this article about?

A So one of the things that we -- we try to look at with neonatal abstinence syndrome, we're trying to find additional risk factors that -- that will tell us whether or not a baby is going to withdrawal severely or not.

So if when we look at mom's -- especially if we look at mom's -- we like to look at them in the MAP program because they're all getting about the same amount of opiate -- same level of opiate exposures, and some babies have withdrawal symptoms and some don't, and -- even though they've all clearly been exposed. And so

we're trying -- we were looking for characteristics that would help to tell us whether or not these -- these neonates would withdrawal.

So in -- so what this paper is, is -- what we identified is that if mom had a history of postpartum depression -- now, obviously, if the mom is pregnant, we can't use, you know, postpartum depression as a risk factor because it doesn't develop until, you know, by definition, postpartum. So but a history of postpartum depression, when women have -- have had postpartum depression initially, typically, they will have it in subsequent pregnancies.

And what this paper does is it identifies, looks at the different measures of NAS severity, and what we -- what we're able to show is that a history of postpartum depression is indeed a risk factor that the exposed neonate will withdrawal more severely.

Q Okay. So this study of comparing postpartum depression with NAS or looking at the interaction of those two issues, that's -- that's a subset of your broader NAS research?

A Yes.

Q Okay. If you go back to the first page

under the Abstract paragraph -- in the Abstract paragraph, the third sentence says: "We studied 109 pregnant women in medication-assisted treatment and their neonates to determine if psychiatric conditions co-occurring with substance use disorder contributed to the severity of neonatal withdrawal." Do you see that?

A Yes.

Q Okay. And if you turn back to Page 80, Table 1, it says: "Table 1, Cohort demographics," and then "Maternal characteristics," it says: "N = 109." Does that refer to the 109 women that were in the study?

A Yes.

Q Okay. And then below that a few lines down it says: "Hepatitis C - no."

No refers to number, right?

A It does.

Q And then it says: "68." Do you see that?

A Yes.

Q So that means that 68 out of -- out of 109 women in this study had Hepatitis C?

A Yes.

Q That's a very high number, correct?

A It's a --

MR. JONES: I object. I object to the form of that question.

MR. BURNETT: I'm sorry. I didn't hear the objection.

MR. JONES: I object to the -- just the form of the question.

MR. BURNETT: Okay.

A It is -- I mean it's descriptive of this population.

Q What do you mean?

A That -- I mean 68 of those women had -- had Hep C. That's fairly typical levels we see with -- with MAT population in through looking at this study and others.

Q And these women, because they were receiving medication-assisted treatment, they all had some form of substance use disorder, right?

A Specifically, because they were in MAT -- they were in a buprenorphine MAT program, these women specifically had opioid use disorder.

Q Okay. And you're saying that rates of Hepatitis C, like these rates, are typical among people in medication-assisted treatment?

A When we look at -- when we've looked at

populations -- you know, within my group, when we've specifically looked at our -- our populations and looked at the Hep C rates, these are the numbers that we typically see within our MAT programs.

Q Okay. If you look down a little bit further it says: "Maternal psychiatric diagnoses number greater than one comorbid psychiatric diagnoses," and it says: "35." Do you see that?

A Yeah. That does not include substance use disorder if you -- so a substance use disorder is automatically a -- a behavioral health disorder so...

Q Okay. And then below that there are numbers for bipolar disorder, depressive disorder, generalized anxiety disorder, posttraumatic stress disorder, postpartum depression. Do you see those?

A Yes. Yes.

Q Are those all examples of maternal psychiatric diagnoses?

A I would say this is a -- that this is a fair sampling of the -- of this population.

Q So these sorts of psychiatric disorders are -- are common within this population?

A Based on -- based on our -- our samplings, yes.

Q Okay. And then you see the bottom of that table it says: "State of residence: West Virginia, 75. Kentucky, 16. Ohio, 18." Do you see those numbers?

A Uh-huh (affirmative). Yes.

Q So that shows that for this demo -- this -- this study of 109 women, the majority were from West Virginia, right?

A Yes.

Q Do you happen to know how many were from Cabell County or Huntington?

A I do not know.

Q Okay. If you look --

A They were all treated in Cabell County.

Q Okay. They were treated with MAT in Cabell County?

A Yes.

Q Okay. And those treatment locations, those could have been hospitals as well as other MAT outlets?

A No. This -- specifically this population was either treated at the MARC program at Marshall or -- and Valley's MAT program over in

their Highlawn facility, both within in Huntington.

Q Okay. What is the MARC program?

A It's the Maternal Addiction Recovery and Care program. It's a -- it's a program from Marshall's OB-GYN department specifically for pregnant women who have opiate use disorder.

Q Okay. Bottom of Table 1, lower left, a couple of lines up it refers to numbers for heroin, prescription opiates and methadone. Do you see those numbers?

A Yep.

Q So the numbers are 45, 59 and 3 respectively. And so that is the number of babies that were exposed to those drugs during the mother's pregnancy?

A Yes. Some obviously were exposed to more than one.

Q So that shows that out of 109 women, 45 of them had used heroin during pregnancy?

A Yes.

Q And 59 of them had used a prescription opiate during pregnancy?

A Yes.

Q And 3 had used methadone during

pregnancy?

A Yes.

Q Okay. And those numbers could overlap, right? A -- a mother could use both heroin and a prescription opiate?

A Yes.

Q Okay. Skipping over to Table 2, about halfway down there's a characteristic called "Day of life methadone treatment began - days." Do you see that?

A Yes.

Q Okay. And under female it says: "2.4 plus or minus 1.5." Under male it says: "1.9 plus or minus 1.4." Do you see that?

A Right. Uh-huh (affirmative).

Q Is that the day of the NAS baby's birth when they are put on methadone treatment on average?

A For this group, yes. So the females who are on average, you know, halfway through their -- their third day of life, and the males within their -- within their second day of life.

Q Is -- is methadone the most common treatment for NAS in babies?

A At our hospital.

that we looked at in Table 1 a few minutes ago?

A Yes.

Q Okay. You can set that aside. Let's open Tab 13.

MR. BURNETT: And this will be Exhibit 7. So, Moniqúe, you can obviously close this document.

(EXHIBIT 7 WAS MARKED.)

MR. BURNETT: And, again, my paper copy is missing every other page. The electronic version that Moniqúe just called up has every page.

BY MR. BURNETT:

Q I'm just going to refer you to the first page. So Exhibit 7 is an article from the Journal of Pediatric Health Care, Volume 33, No. 1. The title is: 'Novel Withdrawal Symptoms of a Neonate Prenatally Exposed to a Fentanyl Analog'. Do you see that?

A I do.

Q Is this an article that you co-authored?

A I am the senior author.

Q Okay. And in the introduction I just want to point you to some language there. A

couple lines down there's a sentence that begins: "The increase in the incidence of NAS that has followed the opioid epidemic is especially evident in the state of West Virginia. The Centers for Disease Control and Prevention reported that in 2013, West Virginia had the highest rate of babies born with NAS at 33.4 per 1,000 live births." Do you see that language?

A Uh-huh (affirmative). Yes.

Q When it says the highest rate, that's the highest rate nationally among states?

A Yes.

Q Is that consistent with your understanding that West Virginia had the highest rate of NAS nationwide?

A Yes.

Q Does West Virginia still have the highest rate of NAS to your knowledge?

A I don't -- I don't think I have seen data more -- more recent data than -- than what's displayed here.

Q Okay. You can set that aside. Let's open Tab 15, please.

MR. BURNETT: This will be Exhibit 8.

(EXHIBIT 8 WAS MARKED.)

BY MR. BURNETT:

Q Okay. Do you have that in front of you, paper copy?

A I do.

Q Okay. So Exhibit 8 is an article in the Journal of Pediatrics & Child Health Care, titled: "Polydrug Abuse and Fetal Exposure: A Review." And you see that you were listed as one of the authors?

A Again, I'm a senior author.

Q Senior author, yes.

In the introduction, the second paragraph, it says: "Whether prescribed by a physician or obtained illegally, opioid addiction is a cumbersome public health issue, one which affects pregnant women and their infants by proxy. Opioids cross the placenta very rapidly, creating a drug equilibrium between fetus and mother, and this equilibrium has the potential to affect the developing fetus in many ways. One of the most common effects of intrauterine exposure to opioids is Neonatal Abstinence Syndrome, a withdrawal syndrome that occurs shortly after birth due to the abrupt cessation of opioid delivery to the infant." Do you see that language?

A I do.

Q Is that consistent with what we have been discussing in terms of the -- you know, the definition of NAS?

A Yeah. Well, clearly, I -- you know, I'm the senior author on the paper. I agree with that statement completely.

Q Okay. Just one more, Tab 16. So you can close this one. Let's open up Tab 16, Envelope 16.

MR. BURNETT: We'll mark this Exhibit 9.

(EXHIBIT 9 WAS MARKED.)

BY MR. BURNETT:

Q This is an article from the Journal of Perinatology titled: "A management strategy that reduce NICU admissions and decreases charges from the front line of the neonatal abstinence syndrome epidemic." Are you the lead author on this article?

A I am the senior author.

Q I'm sorry, yeah, senior officer, okay -- senior author.

A Uh-huh (affirmative).

Q I want to direct your attention to the second page in the section titled: 'Systems of

Care' -- or 'System of Care'. And I won't read it because it's a long paragraph, but you can read it. It says that your institution opened a neonatal therapeutic unit, and then it describes what sort of services are operated by that NTU characterized by low-light and low-noise and rockers who were specially trained to hold and rock the neonates when appropriate. Do you see that language?

A I do.

Q And does that language reflect the fact that -- that babies with NAS require special care that goes beyond even what other NICU babies require?

A It's different. It's very different from what NICU babies require. The -- the low-light -- the -- so -- so one of the things that happens when individuals withdrawal is they become hypersensitive to their -- to their environment. Everything becomes loud and, you know, lights and -- and noises affect the neonates pretty strongly. And so the NICU is a place designed for babies with respiratory issues, cardiac issues, and so it's loud and there's a lot of noisy machines, ventilators, things like that.

And so that's really -- the typical area where you would take care of a neonate that was having issues is the NICU, was -- was thought by our clinicians to be unsuitable for NAS treatment, and so the NTU was established.

Q All right. So -- right. So babies with NAS require different specialized care?

A Uh-huh (affirmative).

Q Okay.

A And this -- the architects of the NTU were Sean Loudin, Joe Werthammer and -- and Sara Murray, all who were co-authors on this paper.

Q Okay. Understood. We can set that document aside.

Now, if you could -- if you could turn to Tab 7 or Envelope 7.

A Uh-huh (affirmative). Okay.

Q Well, let's wait until it's called up electronically so everyone can see it.

A Oh, I can't hear you.

Q Can you hear me? Can you hear me, Dr. Davies?

THE VIDEOGRAPHER: He's still connected to audio.

MR. BURNETT: Joel, can you hear me?
MR. JONES: Can you hear us?
Can you hear us?
MR. BURNETT: I can hear you, yes. I can hear both of you.
MR. JONES: Okay. I see your mouth moving, but I don't hear anything.
MR. BURNETT: Okay. Can you still not hear me? How about now?
THE VIDEOGRAPHER: We can still hear you.
MR. BURNETT: I can hear you.
THE WITNESS: Oh, there you are. Oh, okay.
MR. BURNETT: Joel, can you hear me?
MR. JONES: Yes. Thank you.
THE WITNESS: We got it fixed.
MR. BURNETT: Ms. Russo, I assume you can hear me as well?
MS. RUSSO: I can.
MR. BURNETT: Okay. All right. So this is -- I believe this is Exhibit 10.
(EXHIBIT 10 WAS MARKED.)
THE WITNESS: Okay.

BY MR. BURNETT:

Q Do you recognize this document?

MS. KEARSE: Will you repeat your question?

MR. BURNETT: Yeah.

BY MR. BURNETT:

Q Dr. Davies, do you recognize this document?

A Yes. This is a data visualization put together by my team.

Q Okay. So the heading on this, it says: 'Opioid Use Disorder Over Time'. To the right it says: "Presented by Marshall Health." Bottom right corner it says: "Marshall-Health-2240" is the Bates number.

A Yes. It's -- it's presented by Marshall Health, but this is data primarily -- you can see from -- from both Cabell, the -- the image on the -- the graph on the right is strictly Cabell. "Overdose Deaths Over Time" that is from -- that's Cabell County data I believe.

And then the "New Diagnoses Per Quarter" is both Cabell and Marshall data, so that's sort of a subset of the population, the number of new diagnoses of opioid use disorder, so

that's -- that's the incidents.

Q Okay. Just stepping back a minute, you said this is a data visualization put together by your team. Can you expand on that?

A Well, this uses a -- a program called Tableau. And basically, we take -- we take the data from the warehouse, and then we create a graph so that you can -- you can visualize the data so it's not just a bunch of tables but actually a -- a graphic representation of -- of the data that's described.

Q So this -- this -- these graphs are generated from data that is in the possession of you or your team?

A Yes. Or we have access to the data.

Q I'm sorry, say that again?

A Or -- or it's data we have access to, so we have a -- we have an agreement with Cabell that allows us to access their data, but it's still -- still very clearly theirs.

Q And when you say Cabell, do you mean Cabell Huntington Hospital?

A Meaning Cabell Huntington Hospital, yes.

Q Okay. And when you refer to your team,

is that the Division of Addiction Sciences or -- or some other team?

A That's specifically my -- my research team, that's -- that's my students and -- and my people that work specifically on a -- on my -- on my research projects.

Q Okay. So as part of your research projects, you and your team gather and evaluate data, is that fair to say?

A That is fair to say.

Q And I believe you said earlier, the subjects of -- of that data include opioid -- opioid use disorder and NAS?

A Yes.

Q Okay. The way this data is presented here, does that come from a website?

A Did it come from a website? No.

Q It comes from your own internal data?

A Yes.

Q Yeah.

A It comes from a -- from our data warehouse.

Q Okay. And, again, you said in the upper left the -- or the graph for OD deaths over time, you said that came from Cabell Huntington

Hospital?

A The graph for -- no. The graph from overdose deaths over time, that is from the State Medical Examiner's Office.

Q Okay.

A But it's -- it's individuals in Cabell County, so it's the same as the State data.

Q Okay. All right. So it's -- it's Cabell County, not Cabell Huntington Hospital?

A That graph, yes. Correct.

Q Okay. And tell me again what the sources are for the graph in the lower left that says: "New Diagnoses Per Quarter Per Year."

A New Diagnoses Per Quarter Per Year are dia -- are new incidents of opioid use disorder diagnosed at either Cabell Huntington Hospital or at Marshall Health clinics.

Q Okay. Marshall Health clinics means health clinics affiliated with Marshall --

A Yes.

Q -- that are part of Marshall Health?

A That are part of Marshall Health.

Q Okay. And then tell me again where the data in the -- the bar chart on the right comes from.

A That -- that data is emergency department visits that had opiates associated with them from Cabell Huntington Hospital.

Q Okay. So -- so not from St. Mary's or any other hospital other than Cabell Huntington Hospital?

A No, no.

Q Okay. Now, if we look in the upper left at opioid overdose -- or, sorry, OD deaths over time, does that refer to only overdose deaths related to opioids?

A Yes.

Q Okay. And that shows that from 2010 to 2017 the number of opioid overdose deaths in Cabell County went from 498 to 873, right?

A Yes.

Q And there's a decrease for 2018. Is that because data is still being collected for 2018?

A No, it's not because of that. But there are -- it's hard to say why exactly, the decrease, but there have been very significant harm-reduction programs and (inaudible) distribution that happened in 2017 that very much could be affecting the over -- lowering the

overdose numbers in 2018.

There has been a fairly significant community response to try and lower the overdose death rate --

Q Uh-huh (affirmative).

A -- to try and keep people alive and get the treatment. So we don't know for sure that that is -- that it's causative, but it is corollary.

Q Okay. The chart below that, New Diagnoses Per Quarter Per Year, that shows a steep increase over time from 35 unique patients diagnosed to 414 in 2019, is that right?

A Yes.

Q And that's patients -- unique patients with new diagnoses of opioid use disorder at Cabell Huntington Hospital or Marshall Health clinics, right?

A Yes.

Q So it shows that between 2010 and 2019 the number of people with new diagnoses of opioid use disorder went up by a factor of more than ten?

A Uh-huh (affirmative).

Q Okay. And on the right the bar chart titled: 'CHH ED Visits By Drug', that shows a

steep increase in emergency department visits related to opioids between 2010 and later years, is that right?

A Yes.

Q Okay. You can set that aside.

MR. BURNETT: Can we open Tab 9, please, Envelope 9, and this will be Exhibit 11.

(EXHIBIT 11 WAS MARKED.)

BY MR. BURNETT:

Q Do you have that in front of you?

A I do.

Q Okay. So this is a document Bates-stamped Marshall-Health-2242 titled: "'OUD Population At a Glance', Presented by Marshall Health." Do you see that?

A I see it.

Q Okay. Does this come from the same data source as the prior exhibit?

A It does.

Q So this comes from data maintained by your team at Marshall?

A It comes from data that we have access to.

Q What -- what is the original source of this data, if you know?

A This data, again, is Cabell Huntington Hospital and Marshall Health clinics.

Q Okay. Does it include places that provide MAT, such as Valley Health and Prestera?

A This does not.

Q Okay. So the -- the OUD population counts here would be higher if you included those additional sources, is that right?

A Yeah. This is clearly a subset of the -- of the whole OUD population in -- in Cabell County in Huntington.

Q Okay. Can you tell what year these numbers are from?

A I believe these are 2019 numbers -- no, these are -- these are current, so these would be current patients. These are current patients so -- and so by definition, a current patient is -- is anybody who has had a visit within the last three years.

Q Okay. And --

A At the time that we -- at the time that we took this.

Q Okay. Do you know what time this was taken as of?

A I don't remember. I think it was -- it

was either -- it was sometime early 2020, I believe. I think it was -- it was early in the year this year.

Q Okay.

A I think first quarter 2020 is when it -- sometime in there.

Q Okay.

A It was before COVID, that's all I remember.

Q Understood. Upper left it says: "Count of Individual SUD Diagnoses for OUD."

A Uh-huh (affirmative).

Q And then it says: "Total OUD Population, 7,627." Do you see that?

A Yes.

Q So what does that number represent?

A That number represents the number of individual patients within the system who have been diagnosed with opioid use disorder.

Q Okay. From Cabell Huntington Hospital and all Marshall clinics, right?

A Yes.

Q Do you have a sense of how much that number would grow if you included other sources of data such as Prestera and Valley Health?

A It's hard to say because the hospital -- it -- it -- you know, a lot of those patients will also be patients in the hospital. Whether or not their opiate use disorder is on record at the hospital, it's -- it's hard to say. It depends on what they come in for.

Clearly, this is a -- this is a subset of the population. I don't think I could -- I could tell you accurately the size of the subset.

Q And the geographic area that this is drawn from, is this just Cabell County?

A This is -- this is Cabell County and Huntington and the City of Huntington. So some of those -- I think one small section of the area includes -- it was actually Wayne County, but it's encompassed within the City of Huntington.

Q Right. Okay. So out of the total population of the City of Huntington and Cabell County as of earlier this year, almost 8,000 people had OUD diagnoses?

A Yes.

Q And actually that number is undercounted because of the other sources that we talked about?

A Yes.

Q Okay. And then so next to Total OUD Population it lists opioids, and that number is the same, 7,627. That's because every one with OUD has taken opioids, is that fair?

A Yes.

Q And then to the right it lists: Alcohol, cannabinoids, sedatives and other categories of drugs, right?

A Right. So -- so obvious -- so when it says opioids -- opioids, that's individuals with opioid use disorder. If it says alcohol, those are individuals with alcohol use disorder in addition to the opioid use disorder. Where it says cannabinoids, that is cannabinoid use disorder in -- in addition to the opioid use disorder --

Q Uh-huh (affirmative).

A -- and so on.

Q Okay. So there's overlap, you know, with opioids and other substances sometimes?

A Most of the time.

Q Most of the time. Okay. Then below that there is two tables, one -- well, it says: "OUD Co-Conditions," and then there's a table called "Psychiatric" and a table called

opioid use diagnoses of individuals with opioid use disorder.

Q And that's because the people who are using -- who are misusing opiates come from all age ranges?

A They do.

Q Okay. All right. You can set that aside.

MR. BURNETT: Let's open Tab 6, Envelope 6, which is will be Exhibit 12.

(EXHIBIT 12 WAS MARKED.)

BY MR. BURNETT:

Q Do you have that in front of you?

A I do.

Q Okay. So this is a one-page document Bates-stamped Marshall-Health-2239. The title is: 'west Virginia Overdose Deaths'. Do you recognize this document?

A Yes.

Q What is it?

A This is a data visualization, just like the others, that we developed from data that we received from the medical examiner's office on overdose deaths.

Q Okay. Does it come from the same

database as the exhibits that we were just looking at?

A It was put in the same database, yes --

Q Okay.

A -- but the source -- where those sources were, the electronic health records, this source is the medical examiner's office.

Q And that's the State Medical Examiner?

A Yes.

Q Okay. I -- I've sometimes heard reference to vital statistics. Is -- is this data from vital statistics?

A Well, the -- all of the State -- the State agencies will distribute their data through the vital statistics office, so the vital statistics is the State Department that assembles data from various State agencies. So the originating office is the Office of the Medical Examiner's Office, but their data is then sent to Vital Statistics who then distributes it out to us and others.

Q Okay. And this data is reliable because it's coming directly from the medical examiner's office?

A Yes.

Q Okay. Unfortunately, the charts on the right, we can't tell what colors correspond to which. Do you happen to know which lines correspond to Cabell by any chance?

A If I remember correctly, the top line is Cabell on all of these graphs.

Q So the highest numbers here are from Cabell?

A I -- I believe so if I'm remembering correctly. Let's see -- Putnam, Wayne -- oh, yeah, those are all Cabell. All the highest ones are Cabell.

The only -- the only county that would rival Cabell would be Kanawha, and they're not presented on this visualization. So, yeah, the top line is Cabell on all of these.

Q Okay. So does that mean that, you know, at least among these five counties listed here, Cabell had the highest number of overdose deaths for each of these five drugs?

A That had those drugs within the toxicology, right. So those drugs were discovered in the toxicology within overdose deaths.

Q Yeah. Okay. So for fentanyl it shows that between 2014 and 2017 that the numbers went

from almost 0 to roughly 150 overdose deaths where fentanyl was found in the toxicology, right?

A Yes.

Q Okay. And for heroin, at the bottom, it shows that for Cabell the numbers went from almost 0 in 2010 to over 50 in 2017, right?

A Yes.

Q Okay. And then you look -- if you look upper left, there's a chart titled: 'Age of Death (2010 to 2016)'.

A Uh-huh (affirmative).

Q Do you see that?

A I do.

Q And that shows a range of deaths that go from 0 to 89, right?

A Yes.

Q And the majority are between 20 and 60 or so, right?

A Yeah. Between 20 and 60. That's a fairly wide range.

Q Right. So that's showing there's a wide range of the ages at which people have died of overdose in West Virginia?

A That's what the data says.

Q And is this -- are those deaths

specific to opioids?

A I -- I would have to look at the data, but opioids is always going to be a major cause. The other drugs that we're -- where you see -- when you go through this data individually, the synthetic marijuana can cause an overdose death.

But by and large if there's not an opiate associated where you might get an overdose, you're not likely to get death. So the vast -- and I'm going on -- I'm going on memory here, but there are very few of these overdose deaths that are in this dataset that I can remember that do not have an opiate associated with it.

Q And those opiate overdose deaths, those include both prescription and illicit opioids, right?

A Yes.

Q And sometimes people have both prescription and illicit opioids in their system in the toxicology report, right?

A That is an accurate statement.

Q And when I refer to illicit, what is your understanding of that term?

A Well, I -- I'm assuming you use it -- you're using it like most where illicit -- illicit

substances are -- are non-prescribed opiates, but primarily I think you probably mean injection drugs.

Q And what are those drugs?

A So -- well, just a lot of drugs are injected, right? So typically you think heroin. Heroin disappeared from -- from this area for a while. People thought they were buying heroin and they were really getting fentanyl, so it's fentanyl, heroin. But a lot of the prescription drugs, even buprenorphine, methadone, Oxycontin, will be crushed and injected as well.

So illicit would -- you know, to me means it was obtained without a prescription by anybody. And then of course opiate misuse would be any misuse of -- of a drug, including ones that were originally prescribed for somebody.

Q Okay. And the -- the charts that we looked at on the right side of this document show a sharp increase in fentanyl and heroin overdose deaths in recent years, is that a fair summary?

A That is a fair summary. You know, the -- you know, in talking to people by and large before 2010, what I hear directly from patients who have been around a long time, who have

suffered through opioid use disorder, primarily people who are now sponsors or they are -- they are in the recovery area, they said before 2010 it was mostly as they say pills. They weren't specific. And then after that, we have seen a huge switch to the injection drug use.

Q And when you say pills, are you referring to prescription opioids?

A I'm -- I'm merely saying what I was told. When they say pills, they mean opiates in a pill form.

Q Right. So they -- they may or may not be pursuant to a prescription?

A I have no -- I have no way to verify that.

Q Sure. Okay.

MR. BURNETT: All right. You can set that document aside.

THE VIDEOGRAPHER: Counsel, I'm sorry to interrupt. If you're moving onto another document, can we take a short break so I can change my media tape?

MR. BURNETT: Sure. And I was -- I was about to say, I -- I believe I have just one more document, so I'm almost done.

There are, throughout the time, various, you know, physicians and -- and, you know, social workers who participate in -- in child health, (inaudible) three, those kind of groups all -- all have participated in Healthy Connections.

Q So Healthy Connections was an organization that was geared towards providing and addressing children's health issues?

A Right, specifically around NAS. Because, you know, we have them in the hospital, and then we -- and then you sort of lose track of them. And so it was -- it was a way to start creating -- bringing organizations together so that we could have a more continuous flow in terms of -- of helping these children and their families.

Q You had mentioned that your ability to participate in something like Healthy Connections is limited because of your availability, you're so busy. What's taking up the majority of your time in your current role at Marshall Health?

A Research. You know, trying to -- trying to put all of these disparate -- you know, had this -- had this lawsuit happened in -- you

know, in the -- in two years or three years, I probably could have given everybody a lot -- a lot more intricate data, but we're in the process of building a -- a data system where we're actually connecting all of these pieces together so we can give real answers, but it takes time and it's expensive.

And we have -- we have -- you know, less -- we don't have the resources we necessarily need to build a system like this, so but it -- we're doing it anyway.

You know plus we have -- I have a number of basic research projects where we're looking at data. We're doing prospective research. We're recruiting patients, which has been largely on hold.

Plus, I'm in -- we're in the process of doing an evaluation of -- of the Cabell County response for the CDC that -- to find out what's really working and what's -- what could be replicated for other communities.

Q Okay. A little bit of follow-up on -- on that since that's a lot of information. You said you're working with the CDC, or you're providing a response to the CDC what's working in

Cabell County. Is that --

A Uh-huh (affirmative).

Q -- as it respects the care and treatment of NAS children?

A Well, that's -- that's for -- for addiction across the board, including NAS.

Q So what other data or response are you providing to the CDC?

A Well, we're in -- we're still in the progress of collecting that data.

Q What data are you collecting?

A Well, we're collecting qualitative data, doing -- doing interviews, doing surveys. Plus we're putting together this data system so we can pull quantitative data to look at, if we've been effective at getting more people into treatment and reducing overdoses, but we won't have that data collected for another six months.

Q And you said that you're working on this process data system. What -- what are the data points you're looking to fill in for this large process data system?

A Well, we want to be able to -- to look at the community as a whole, right? So we have disparate systems like most -- like most

communities do.

And so each system has a number of patients, but we want to identify the right number of patients, who needs help, are they getting to the right -- are they getting to the right kind of -- you know, I talked about earlier today different people have different success levels with different treatment modalities. And so we want to identify the risk factors that tell us which treatment modalities are -- are likely to be most effective so that instead of somebody going into treatments four or five, six, eight times, it's -- it's maybe two or three.

We want to make sure we're optimizing our -- our system. So if we're going to increase the number of available beds, we want to make sure we're using those -- all the beds effectively. It looks like we are, but it's -- because everything is full all the time. But to really be able to tell what our -- what our capacity is -- is necessary, you have got to -- you have to do this kind of work. It just -- it takes a long time, and it's very expensive to do.

Q And is one of the data points you're collecting the specific opioids that community

members are using?

A Not yet. I mean it's -- it's just a matter of -- we haven't gotten that far. Will it be at some point? Yes, but we haven't gotten that far yet.

Q Do you have a process in place by which to collect the specific opioids that members of the community are using, or you have not developed the process yet to collect that data?

A So we're -- we're building that process now.

Q So what's the state of the process?

A It's more than just a process. It's -- what's that?

Q What's the state of the process, or what's the current plan in order to capture that data?

A Well, the -- the idea is -- is to feed the disparate systems into a -- into a single data warehouse in a way that protects individual patient information. So we're building the system, and we're building it -- you know, we have to build it piece by piece, but we all -- you know, I've only got one -- I've only got one data architect so it just -- eventually, we'll get to

all of those pieces, but it will take a while.

Q Is the -- the thought or the current plan to take this information if it's contained in medical records or get it from other sources?

A Both.

Q And what other sources would be available to you to determine the specific types of opioids that members of the community are using?

A Well, there's a lot of records. There's a lot of self-report records in various agencies where they do, you know, social determinant surveys and interviews on -- on intakes. There's -- there's criminal justice data points. There are data points in -- in various agencies in -- in workforce areas that do drug tests. There are, of course, the, you know, Prescription Drug Monitoring Program.

But we have to link it to individual patients. We have to do it in a way that protects the patient's identity to make sure we're -- we're compliant with HIPAA and HITECH and, you know, 42 CFR Part 2, plus -- plus the West Virginia laws.

So it's -- it's a tricky process.

We've figured out a way to do it. It's just a matter of going through the -- doing the work now.

Q And have you created documents that address the way to collect this data?

A Well, each -- each data point is going to be the -- the document -- I mean, yes, but each data point is going to be different. It's going to have different documentation depending on what we are doing.

Q And is there someone -- you had mentioned that it's very difficult to take the order monitoring programs and the individual medical records and correlate specific prescriptions to patients. Is there anyone on your team who's qualified to do that currently?

A It's not a matter -- it's not a matter of are -- are we qualified to do it. It's a matter of having the -- having enough personnel to be able to do all that work.

Q Do you currently have enough personnel to do all of that work?

A Oh, not even close.

Q How many -- how many people do you think you need?

A Ideally, I would -- I would -- I would

probably -- to do all the work we would probably want a team of 10 or 12.

Q And how large is your team right now?

A Me and one other person.

Q You also said you've had to halt basic research projects. Have you suspended those because of COVID-19 and the epidemic?

A Yeah. Yeah. We can't -- we can't recruit patients right now because -- because of the COVID pandemic. It's hard enough getting a -- you know, letting the clinicians do their part and having the telemedicine and keeping -- keeping these -- this particular population engaged.

Q And what types of patient populations were you looking to engage with for these research projects?

A Well, we have two ongoing research projects where we were recruiting patients that we were in the process of recruiting when we halted. One -- one has -- recruits men in an abstinence-based program, the other one is pregnant women and their -- and their child.

Q And, I'm sorry, I missed the first org -- the first group of patients that you're recruiting or enrolling.

A They're -- they're men in an abstinence-based program.

Q I know you were asked if you've ever been deposed before. Have you ever testified in a trial?

A Nope.

Q Have you ever been a party to a lawsuit?

A Not that I'm aware of.

Q Have you had a conversation with anyone who is not your lawyer representing you here today on behalf of Marshall Health whether you would testify in the trial, to the extent this lawsuit culminated in a trial?

A No.

Q I believe your attorney has received some documents from my office on behalf of AmerisourceBergen Drug Corporation, and there should be a document identified as Tab 28, which is the Third Amended Complaint in this matter.

MR. JONES: Let's pause for a minute. I need to grab that -- grab that box for him.

THE WITNESS: Okay. He's going to -- we've got to pause for a minute while Joel grabs that box.

you just described in your answer in terms of any correlation or cause and effect or relationship between mental health disorders and opioid use?

A I don't think that data exists. That's going to have to be prospective studies to -- to determine that.

Q And is that one of the --

A Everything else is --

Q One of the list of data points --

A I'm sorry. Go ahead.

Q Is that one of the lists of data points that you would like to review that you've put into this -- the future programs for your department?

A Yeah, absolutely. But I -- I think, like I said, that's going to have to be prospective research where we actually design a protocol and -- and move -- move completely forward with it.

Q Have you started to design the protocol?

A That one, no, not yet. It's on my -- it's on my list. I have a very long list.

There's a lot that needs to be done here in terms of research. There's just --

there's just so much that needs to be done, and -- and we can't rely on other communities to do it because there are some cultural things that are -- are unique here so...

Q What cultural issues are unique to --

A Well, there are cultural issues that are unique in everywhere, right? So any time you have a best practice, you can't just take that best practice and use it somewhere else. You have to take it and use it and develop it and then track those measures to make sure it functions.

We have a community here -- in Appalachia everything is -- is separated, right? Cabell County and Huntington is -- is fairly flat, but you're still -- you're still dealing with an Appalachian culture.

And -- and so there's -- there was a lot of things that was protective about that culture in terms of the family dynamic and strong family ties. But once addiction has now seeped into so many families, a lot of that has broken down, so our natural resistant systems have -- are not functioning right now, so there has to be a rebuild of all of that.

And so as we develop treatments, and as

we develop -- adopt new best practices, we have to track how those changes in -- in the -- in the social structure is going to be maintained. Because that social structure that the -- the individual social systems in that social structure within the community is a huge part of recovery.

Q We had talked earlier about the various risks that you were aware with the use opioids, whether it's abuse of opioids, physical dependence or addiction. When did you first become aware of the risks associated with the use of opioids?

A With the risk associated with -- with opioids? I mean that's -- I mean, you know, obviously I have had neurobiology courses as I was getting my, you know -- as I was going through school. And -- and addiction, particularly addiction to opiates, is always part of that because it's a -- it's a, you know, a pretty dynamic system.

But in terms of what we were doing here, I mean I've known -- I've known about addiction my whole life. But it's a matter of really getting in and -- and -- and studying it in a very comprehensive way starting with -- you know, in 2013 when I started looking at the NAS

OUD Population At a Glance

presented by Marshall Health

Year(s) of OUD Diagnosis

(Multiple values)

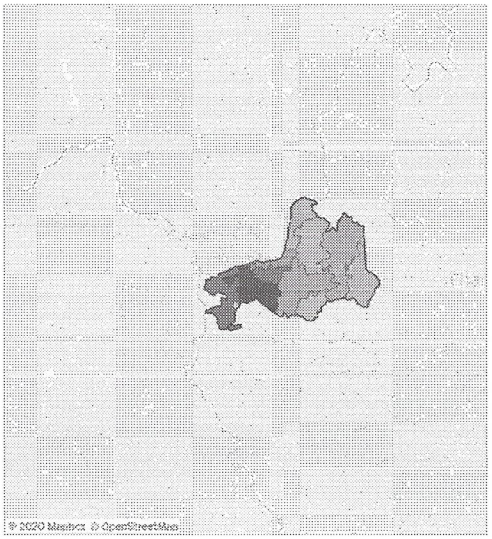
Count of Individual SUD Diagnoses for OUD

Total OUD Population	Opioids	Alcohol	Cannabinoids	Sedatives, Hypnotics Or Anxiolytics	Cocaine	Hallucinogens	Inhalants	Other Stimulants	Tobacco
7,627	7,627	971	1,228	544	648	16	942	1,307	2,390

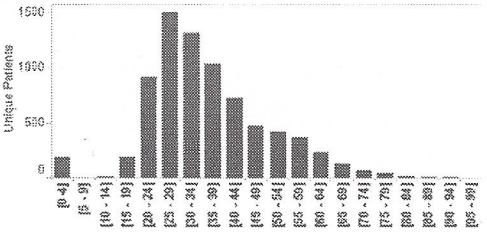
OUD Co-Conditions

Psychiatric	Anxiety & Phobic Disorde.	3,138
	Depression	2,152
	Bipolar Disorder	720
	Other Mood Disorders	183
	Eating Disorders	120
	Schizophrenia and Delusi	166
	Personality Disorders	79
	Psychotic Disorders	26
	Dissociative Disorder	18
	Conduct Disorder	12
	Impulse Disorders	2
Clinical	Body Pain	4,892
	Accidents & Unspecified I.	3,232
	Hepatitis C	2,657
	Neoplasms	1,289
	Accidental Drug Poisoning	1,180
	Endocarditis	613
	Burns	453
	Assault	401
	Surgery	217
	Chlamydia	115
	HIV	105
	HPV	65
	Gonorrhea	28

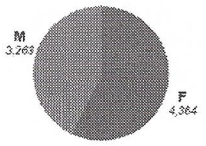
Patient Density by Location OUD



Age at OUD Diagnosis



Sex OUD



MarshallHealth-00002242

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF WEST VIRGINIA

THE CITY OF HUNTINGTON,
Plaintiff,

v. Civil Action No. 3:17-01362

AMERISOURCEBERGEN DRUG CORPORATION, *et al.*
Defendants.

CABELL COUNTY COMMISSION,
Plaintiff,

v. Civil Action No. 3:17-01665

AMERISOURCEBERGEN DRUG CORPORATION, *et al.*
Defendants.

DECLARATION OF TODD DAVIES, Ph.D.

1. I am an Associate Professor and the Associate Director of Research and Development in the Division of Addiction Sciences and the Department of Family and Community Health at Marshall University's Joan C. Edwards School of Medicine.

2. I was deposed in this litigation on July 28, 2020. This declaration supplements and clarifies my testimony.

3. Exhibit 11 of my deposition is a one-page document entitled "OUD Population at a Glance," Bates-stamped MarshallHealth-00002242. It is a screenshot printout from a Marshall Health database of electronic health records that I have access to, as described on pages 109-11 and 115 of my deposition transcript. I created the screenshot.

4. Marshall Health's electronic health records identify patients' place of residence, among other data.

5. Exhibit 11 shows data only for residents of Cabell County and the City of Huntington, including the two Huntington zip codes in Wayne County. I filtered the Marshall Health database at Plaintiffs' request, in response to Plaintiffs' subpoena, to show data only for residents of that specific geographic area.

6. The map in Exhibit 11, "Patient Density by Location OUD," shows the same geographic area (Cabell County and the City of Huntington) corresponding to the data in the exhibit. The native version of Exhibit 11, attached as Exhibit A to this Declaration, shows the geographic area more clearly.

7. I described Exhibit 11 accurately in my deposition when I testified that it is drawn from the population of Cabell County and the City of Huntington, including the part of Huntington in Wayne County. See pages 117-18 of my transcript.

8. The figure in the upper left of Exhibit 11, "Total OUD Population," listing 7,627, represents the total number of current, unique patients diagnosed by Cabell Huntington Hospital or Marshall Health clinics with opioid use disorder, among the residents of Cabell County and the City of Huntington (including the two Huntington zip codes in Wayne County). See pages 114-18 of my deposition transcript. As stated in my deposition, it shows that "out of the total population of the City of Huntington and Cabell County as of earlier this year, almost 8,000 people had OUD diagnoses." *Id.* p. 118. The data comes from the Marshall Health database.

9. Exhibit 13 to my deposition is a 25-page document entitled "Marshall MAT-LINK Project Application," Bates-stamped MarshallHealth-00000693-717. It is a grant application that I drafted, as described on pages 129-30 of my transcript.

10. The second page of Exhibit 13 states that "There are 7,581 unique individuals diagnosed with opioid use disorder (OUD) in our system with an additional 8,137 unique

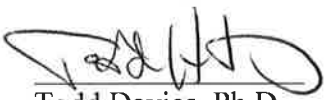
individuals with multiple failed drug screens without a diagnosis or opioid prescription." The population counts in this sentence are not drawn from the population of Cabell County and the City of Huntington, nor from the entire patient population of Marshall Health's catchment area. The population at issue is instead tied to the target population of the grant application.

11. The parties should rely on Exhibit 11, not Exhibit 13, for the correct number of current, unique patients diagnosed by Cabell Huntington Hospital or Marshall Health clinics with opioid use disorder, among the residents of Cabell County and the City of Huntington (including the two Huntington zip codes in Wayne County), as listed in Marshall Health's electronic health records.

12. Page 2 of Exhibit 13 refers to a roughly 1:1 ratio of unique individuals in Marshall Health's system diagnosed with opioid use disorder, compared to unique individuals with multiple failed drug screens without a diagnosis or opioid prescription (7,581 to 8,137), for the population at issue in the exhibit. Based on my experience, the Marshall Health database would likely show a similar 1:1 ratio for residents of Cabell County and the City of Huntington. I would therefore estimate that roughly 8,000 current patients have failed multiple drug screening tests for the population described in Exhibit 11. In my deposition, I accurately testified that individuals with multiple failed drug screens without a diagnosis or opioid prescription are likely to have opioid use disorder. See pages 34-36 and 131-32 of my transcript.

13. I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on September 15, 2020



Todd Davies, Ph.D.

Exhibit A

OUD Population At a Glance

presented by Marshall Health

Year(s) of OUD Diagnosis

(Multiple values)

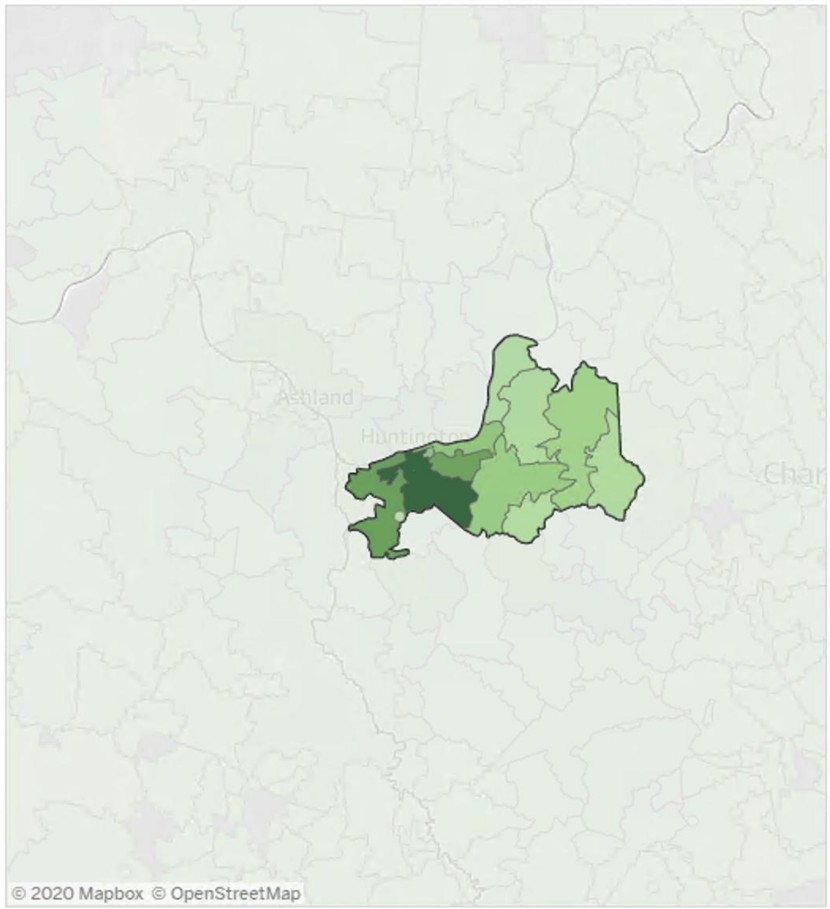
Count of Individual SUD Diagnoses for OUD

Total OUD Population	Opioids	Alcohol	Cannabinoids	Sedatives, Hypnotics Or Anxiolytics	Cocaine	Hallucinogens	Inhalants	Other Stimulants	Tobacco
7,627	7,627	971	1,228	544	648	16	942	1,307	2,390

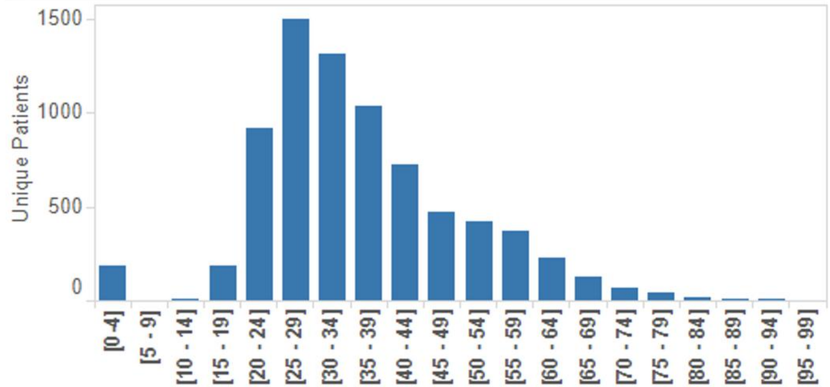
OUD Co-Conditions

Psychiatric	Anxiety & Phobic Disorde..	3,139
	Depression	2,152
	Bipolar Disorder	720
	Other Mood Disorders	183
	Eating Disorders	120
	Schizophrenia and Delusi..	108
	Personality Disorders	79
	Psychotic Disorders	25
	Dissociative Disorder	18
	Conduct Disorder	12
	Impulse Disorders	2
Clinical	Body Pain	4,892
	Accidents & Unspecified I..	3,232
	Hepatitis C	2,657
	Neoplasms	1,289
	Accidental Drug Poisoning	1,180
	Endocarditis	613
	Burns	453
	Assault	401
	Surgery	217
	Chlamydia	115
	HIV	106
	HPV	65
	Gonorrhea	28

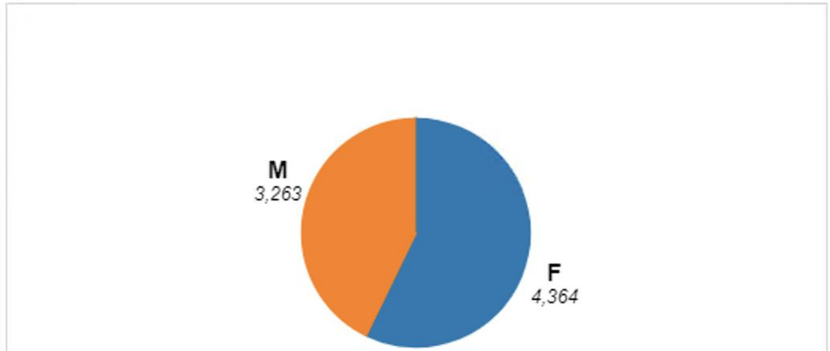
Patient Density by Location OUD



Age at OUD Diagnosis



Sex OUD



Ex C – Deposition Excerpts of Rahul Gupta, M.D., dated 09/11/2020

Plaintiffs' Supplemental Federal Rule Civil Procedure 26(a)(2)(C) Disclosures

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA

* *

THE CITY OF HUNTINGTON,

Plaintiff,

vs. CIVIL ACTION
NO. 3:17-01362

AMERISOURCEBERGEN DRUG CORPORATION, et al.,

Defendants.

_____

CABELL COUNTY COMMISSION,

Plaintiff,

vs. CIVIL ACTION
NO. 3:17-01665

AMERISOURCEBERGEN DRUG CORPORATION, et al.,

Defendants.

* *

Videotaped and videoconference deposition of RAHUL GUPTA, M.D., taken by the Defendants under the Federal Rules of Civil Procedure in the above-entitled action, pursuant to notice, before Teresa S. Evans, a Registered Merit Reporter, all parties located remotely, on the 11th day of September, 2020.

about?

A. I'm sorry, can you repeat that, please?

Q. Sure. What is your understanding of this case? What is it about?

A. My understanding is that this case is related to the number of overdose deaths and generally the suffering and the carnage that has occurred broadly in the state of West Virginia, but narrowly in Cabell County and the City of Huntington as a result of oversupply as well as the over-availability of prescription opioids and the consequences resulting from that.

Q. And what is the basis of your understanding? How did you come to have that understanding?

A. As I had mentioned before, that including my work as the Commissioner for the Bureau of Public Health as well as the State's chief health officer, having worked in this area, having read the reports as well as public records and accounts and have been deposed and involved in the workings of the Department of Health and Human Resources of West Virginia, is how I come about to have that understanding.

A. What I mean by "the volume" aspect is, clearly by the time I became Commissioner, it was becoming more relevant and more clear that there was a volume issue when it came to the deaths and the suffering on the streets.

What that meant was, the overwhelming volume that was reaching the people of West Virginia was plainly involved in the killing of West Virginians almost every 12 hours around the clock, and that became important to us, as well as other sufferings that were occurring.

Q. Volume of what?

A. The volume of prescription opioid pills.

Q. And what was the source of that volume?

A. So the source of that volume clearly was coming from -- through the manufacturers and distributors into the state of West Virginia and then through the pharmacies, being dispensed into the hands of innocent public.

Q. You said you also looked at what was going well and what was not going well. What did you think was going well?

A. Well, by the time I came into the office, clearly we had passed some policies -- please mind

you, that these are downstream efforts. We were drowning, and we were trying - struggling - to do what we could do at a city, county and a state level to help people survive.

So what we did was, we had passed several pieces of legislation and policy that had made its way into commonplace, which means that we had by the time figuring out how to get physicians trained into understanding how diversion occurs, how they could prescribe more responsibly to prevent that diversion. Although they're trying to help the people that they're working with, meaning their patients.

We were looking at figuring out how to provide the antidote called naloxone into the hands of the public so they can actually get an opportunity to live.

We were trying to figure out how to control -- you know, provide limitations to the -- some of the bad docs, and how do we go after those bad docs?

So there was a whole host of initial work that was happening in terms of downstream attempts to control what we could control, what was

within our hands, our power, to be able to do, at a cost that was overwhelming.

Because at the same time, we were having more and more children going to foster care. Our child welfare cost was rising at an enormous rate that we were having difficulty to control, controlling the budget for the state.

So we were at the edges of going bankrupt as a state, and primarily the crisis was being driven but through the volume that was coming up upstream to us.

So those were some of the things that we were attempting to do. We were also trying to do justice reform, criminal justice reform, reininvestments into -- because what we found was a significant proportion of people that were ending up incarcerated had substance abuse problems, and that was primarily the reason, and they were not being helped by being incarcerated and being in prison.

We were losing -- as I mentioned, every 12 hours, we were losing a working West Virginian, never to come back again, so this was a transgenerational crisis.

You said you focus on the opioid -- detailing the opioid crisis in that class. Does your investigation include the causes of the opioid epidemic?

A. We have a discussion on the description of charts and historical perspective. We created -- I ordered - as one of the first acts of being a Commissioner - a historical perspective report that - it's online available - of West Virginia's opioid crisis from 2000 to 2015 data.

I take several pieces of information from that report, that's a public report, done under -- I believe, it was Governor Justice. And I use that as an example to talk about historical. We talk about, obviously, all aspects/facets -- it's a pandemic -- it's an epidemic of epidemics.

We talk about all the consequences that are happening. And then we talk about things that we're doing to solve. The bottom line is, we do talk about, you know, how we got here; but our focus often is: How do we fix this?

And we want, you know, in West Virginia our students to understand that while we didn't break it, we'll have to fix it. And we're going to

have to get together.

So whether it's the HIV outbreaks that happened in Cabell County recently -- which is the second-largest HIV outbreak in the nation's history recently, in Vienna, or the Hepatitis A outbreak that I personally dealt with during my tenure; or the highest levels of Hepatitis C.

We have a record in our country being first or second - compete with Kentucky oftentimes - and the highest levels of -- historic high levels of Hep B, which both transmitted through IV drug use and other aspects. 15 -- 13 to 15 times the national average.

We talk about those things. We talk about: How do you solve these problems? We talk about how do we prevent, you know, 5 percent of the babies that are born with neonatal abstinence syndrome in this state, and that costs a million dollars a baby. And that's a billion dollars - if you add the numbers - of an ongoing liability to the state every single year.

I produced a white paper to -- to the Senate finance chairman about that years ago.

So we talk about actual real issues,

But it doesn't talk about the entire demand/supply chain; it doesn't talk about manufacturing; it doesn't talk about production; it doesn't talk about quotas; it doesn't talk about distribution; it doesn't talk about pharmacies; it doesn't talk about dispensing; it doesn't talk about the transition to heroin and fentanyl.

It doesn't talk about how the transition has happened from prescription to actively illegal and illegitimate drugs; it doesn't talk about how the deaths transitioned to meth and other stimulants in addition to depressants.

So there's a lot of facets to this. As I mentioned before, my job was to get people in a simplified way to understand in a matter of 30 to 40 minutes. So I could spend all day talking about it but I wouldn't have anybody listening to me, because they would all be gone.

Q. Sure. And I understand that this doesn't reflect the full description of the opioid problem in West Virginia or nationally. What I'm asking is: Does this reflect your discussion of the supply-side drivers, as you've written here, of the opioid epidemic?

findings, the evidence-based findings that we had from the social autopsy.

We found that even then - in 2016 - a significant amount of people who were dying had filled their prescription within 30 days of their death. We also found a significant type of people that were incarcerated and then released and then died, overdosed and died.

We found that three out of those four people that died tried to seek help before their time of death within the last year. We also found that there wasn't sufficient amount of naloxone that was being given to people to help them survive.

There weren't enough facilities that were available. So those are the kind of things that became important, and that was something that was not only done in West Virginia, but subsequent to that, we started receiving requests from states and large cities all over the country, because they wanted to repeat what we had done.

So we started providing temporary assistance to, you know, a handful of states at the time, but many more afterwards, and therefore the

A. So the deaths were so bad, now they hear on the news, you know, that New York City has air-conditioned trailers out there for pandemic. I can tell you we had those back in 2015. We had dead bodies that were accumulating at a rate that we could not keep up at the medical examiner's office.

So we had to get trailers that were air conditioned, and when we sort of figure out what -- how do we say that, so we can keep the gracefulness of dead bodies. So we -- you know, we developed names, mobile units, blank lines so that when we explained to the public how we are doing it, we are speaking in a graceful way so it doesn't look like we are disrespecting the dead.

But the fact of the matter was, we were putting bodies in trailers outside because we were so overwhelmed with the number of bodies that were coming in every single day.

Now, on one hand, that was happening. That's carnal.

The second side of this was, you know, our medical examiner offices inside Charleston had bullet holes in it. So that was the other

When that diversion started to happen, and it became a norm in the community - meaning your children or grandchildren or other people; they were there, they got it - friends and families, then that caused those people to become addicted to these medications.

When that happened, then that diversion led for those people to find ways to get those prescriptions. So they would then figure out all of the inappropriate prescribing began or continued and really got voluminous at that point.

So what then happens was: These people were pushing through doctor shopping; they were pushing through -- come out of the woodwork in so many ways. There were lost prescriptions, you know, getting and stealing from anywhere they can steal from, and that just drove the volume -- that continued to drive the volume.

And that volume continued to get diverted. So we got to a point where the significant percentage of that volume that was coming out was inappropriate, and the -- it basically -- you know, the appropriate volume that was appropriate at one point just dwarfed in front

of the extremely high amount of inappropriate volume, which is actually going towards diversion in all of these cases literally, and that as a result of that, the only way to get out of that was to die.

So once you have addiction and we -- there were no -- an adequate amount of treatment facilities, because that hasn't been identified as an issue at the time, and the way you could get out of addiction is by dying, by overdose and dying.

So that was the -- that was what was happening at the time.

Q. All right. Let's talk a little bit about addiction. So how do you define "addiction"? What's your working definition?

A. So the way these medications -- I can just broadly first of all say addiction is a process that can be physical or physiological in nature where your body gets used to whatever that substance is and wants to have it -- desires it a lot more.

Now, it can result in both a physical addiction as well as a psychological addiction, either or both.

Speaking of the opioids in specific, when we take opioids, we have this very basic foundational understanding of the brain. There's our inner brain or the fundamental places of the brain, you know, there's stimulus that allow us to survive.

What that means -- what I mean by that is it exists in all animals. You -- you feel hungry, there's a reason you eat, because when you eat, you feel good.

The reason you feel good is that there's a release of this chemical called Dopamine. So same way, when you're thirsty, you drink. The result of that drinking water is that your Dopamine gets released and tells you -- that's a positive reinforcement for you.

Same way with sexual activity. So there are a few things that are important to our survival as human beings, or any animal. The way we get rewarded, the reward system, is by this Dopamine release and it makes us feel good.

Now, these medications, seem to work similarly. But what they do is basically they hijack that system. And so in that hijacking, that

inner brain that is causing the release of Dopamine --

Initially the morphine - actually, or opioid of any type - makes you release that Dopamine, and you feel good.

After a while, it doesn't work as well. And then you start to require an escalation of the dose. And so basically that inner brain, if it doesn't get that, it asks your outer brain in some way - it's a prefrontal cortex - to do things, to change its behavior in ways in order to seek that drug to supply it.

So after a while, it's not just about getting high; it's actually about surviving and not getting withdrawal symptoms. So typically, if you don't do it, the inner brain is going to punish you.

And a person is fearful of that punishment, so that inner brain sends messages to the outer brain to say, "Hey, I need you to go and engage in activity" - whether that's stealing, prostitution, other aspects - "in order to feed me the habit to continue with the drugs."

And that's why when we say it isn't an

addiction, it's a disease, it's not a will -- it's not something that people can will to do. Maybe it was a will the first couple of times; but afterwards, it's not. It truly is a disease, because that inner brain basically hijacks the rest of your brain and the rest of your body.

Q. All right. So is it fair to say - and you tell me if I'm wrong about this - that when people become addicted; when they're not able to get what they can to fill the addiction that they -- the brain tells them, "Go out and do anything you can to fill that need."

A. Yes.

Q. And does that, in your opinion -- or do you have an opinion whether that leads to things like diversion and further abuse of drugs and adverse consequences of addiction?

A. So at that point, that person is not in control of themselves. Their inner brain has hijacked the entire body. At that point, this monster inside is telling them to seek opioids in one form, shape or other.

Whether it's for them to divert the prescription pills; it's for them to fake a

the monster is off their head.

"Now when I go to my family, I can actually have a conversation and remember it with my family. I can start to feel feelings. I feel I've come back from death. I can watch television, I can remember and I can understand what's happening."

So that piece -- it allows these medications allow you not to worry about just seeking your next fix; it allows you to actually get a job, have a purpose in life, rebuild your community, rebuild your family and actually be able to function.

Q. All right. So turning back to the evolution of this opioid problem in West Virginia, did you at some point see an evolution, a change, from opioids to heroin?

A. As I came in as the Commissioner in 2015, I think that evolution was occurring. I think we were starting to see some of the laws that had been taking place in 2012-2013 -- certainly Governor Tomblin had initiated the Governor's Advisory Committee on Substance Abuse and some of the results were happening.

So we had a sliver of hope at the time that, "Listen, I think we're starting to see a light at the end of the tunnel" in the sense that, look, we're seeing slight reductions, and that's in the presentation you saw where I showed from 2015 to 2016, we went down 15 percent.

So we were becoming very hopeful that now perhaps the deaths will follow, meaning reduction in deaths and suffering and other things.

Q. I'm sorry, you said reduction -- reduction in --

A. Reduction in deaths.

Q. I'm sorry, you said you saw a slight reduction --

A. Reduction in prescriptions. So we started to see from 2015 to 2016, about a 15 to 20 percent reduction in opioid prescriptions.

Q. Okay.

A. And then we were hopeful that we would start to see a reduction in deaths. But we didn't. And then we started to search that why that we're seeing reduction in prescribing but we're not seeing reduction in the deaths from overdose; we're not seeing significant reduction in the substances

of overdose people when they died.

And one of the elements that was happening at the time that, again, now it's easier -- a little bit more easier to recognize, is that every time law enforcement would go and do a drug bust of the bad docs, those people would end up on the street that once were addicted to medication -- prescription medications, now would have to find -- seek and find an alternative, and they would go to the street.

And then they started to use IV drugs, heroin. That was not the only reason it was happening. It was also because the supply of prescription drugs from a diversion standpoint was drying up a little bit.

So as the diverted drugs - opioid prescription drugs - were drying up, then people still needed that fix, as I explained the addiction pathway. That doesn't solve the problem. We were too naive to think just reducing the prescription -- diversions would just cure the problem.

And what actually happened is the opioid crisis began to evolve -- evolve into a second crisis, which would then started to become

this heroin crisis. As we were dealing with that current crisis within the first, a third crisis, which is --

You know, everyone asking -- you know, wanting to make most profit from its product, and we saw the -- this happen, the phenomenon happen, with -- where people were dealing heroin, frankly. So they found -- they realized that they could get a bigger profit if they were -- if they could cut their heroin with another substance that could still give the high or give the need that needs to be fed to the people.

That was called fentanyl. It was a clandestine lab-produced fentanyl that's about 50 to 100 times more potent than morphine. So they would -- they began to cut the heroin with this substance on the street.

The problem that became for people who are addicted is: A, they wouldn't know that; the second, B, every time they inject themselves, not only are they risking HIV or hepatitis or what have you, but they're also basically playing Russian roulette with their life, because they wouldn't know if this is the time they were going to die/

overdose.

This stuff was so potent that some of our law enforcement officials, sometimes they happened to inhale or touch it and they would be overdosed.

So I saw a lot of people who had addiction, they didn't want to die. Neither did the drug dealers want them to die. So what they started to do, as a cry out for help, they would actually go to restaurants, they would go to gas stations, they would go to malls in the bathrooms and inject themselves just so they could be found if they played the Russian roulette and the gun got fired.

So we started to find dead bodies in those places as a result of that. So that's the evolution. That's when I came into the office and I was seeing on literally on a daily basis.

Q. So do you have an opinion based upon everything you've done in your work in West Virginia and your background, training and experience as to whether or not the abuse of heroin, fentanyl, methamphetamines and these cocktail drugs that you saw in the 2014 to 2018

time frame was a -- was caused by the original opioid volume that you saw that resulted in these addicted people.

A. So for a majority of them. There would always be a small portion of people who will have and seek, you know, various forms of addictive substances. That's been true for civilizations over time.

But for the majority of them, there's no doubt in my mind that there's a direct correlation between the diverted prescription pills and its evolution into street drugs in terms of heroin, fentanyl, meth, you name it.

Q. And when you say "a majority," are you able to quantify that any further in terms of if you take 100 percent as total, were you able to quantify it any more specific than that?

A. When I say "majority," I'm really talking about 80 to 90 percent of the population that actually suffered through this. Because if you go back and look at the overdose death rate numbers, prior to this epidemic, it would be like that, Counsel, to get that -- that's where I would go back.

A small amount of people -- certainly those, the noninvolved people - that would be a general baseline - do not tend to be generally also the population that dies. They tend to be people that would use one form of drug or the others - a tiny population, proportion - that has existed, as I said, through civilization, hundreds of years, thousands of years.

But that is minuscule as compared to what we're dealing with today.

Q. And in terms of overdose deaths, you do have knowledge from your work as to the number of overdose deaths -- overdose deaths in West Virginia from, let's say, 2004 until 2018 when you left. Is that true?

A. Yes. I mean, I'm trying to recall the -- I mean, I can recall that in 2017, we finally passed the 1,000 number, which was not only the -- one of the highest rates ever, but it was consistently about 33 percent higher than the second state -- and the second state varied. Sometimes it was New Hampshire, sometimes it was Ohio, sometimes it was Pennsylvania.

But we could -- what didn't change was:

We were high and there's a bunch of lots of states, and then it was the next state in line.

Q. And do you have an opinion as to whether the increase in overdose deaths West Virginia saw during that time was caused by the large volume of opioid pills that originally was deposited or delivered to West Virginia?

A. I think there's no doubt for that.

Q. Now, are NAS babies a causative issue in terms of the opioid epidemic?

A. Yes.

Q. So what is an NAS baby?

A. So NAS stands for neonatal abstinence syndrome, also sometimes called NOWS, or neonatal opioid withdrawal syndrome. We try to differentiate between opioids and other substances.

But in essence, it's a -- it's a syndrome, it's a set of symptoms that could happen in a baby as soon as they're born to a few hours or days afterwards.

Those symptoms could include incessant crying, not being able to be fed, being over irritable. They can have seizures. They can have diarrhea.

And unfortunately, in the early part especially of the crisis, they could die. It is -- we saw that it was directly linked, and here's why: As we saw the total amount of diverted drugs increase, we also saw a similar increase in the number of pregnant women that were taking these diverted drugs.

The pregnant women are still part of the same community, part of the same population. They're no different. So it would be an extraordinary thing to think that they would behave differently.

As they were also taking -- at one point, one in four pregnant women were taking some of these diverted medications. As they do, they become addicted, and as they develop the addiction, and continue to feed their addiction, so is the baby getting the same medications through the placenta while the baby is in the womb.

So the baby's brain, now imagine, is also being fed through the same mechanism. This developing new life inside the womb is also getting the same line of feeding of opioids through the bloodstream of the mother.

So its brain is also -- not only not as -- it's not -- it's supposed to be developing right when it's not only -- we don't know a lot about how it develops in the presence of opioids, but it's developing the same time as being confounded by these opioids.

So as the cord gets cut, meaning the placenta gets cut and the baby gets delivered, that baby goes into withdrawals. It's literally the equivalent of a withdrawal. We know that because we treat the withdrawals by various mechanisms, but one of the mechanisms -- the pharmaceutical mechanism to treat it, is through morphine. Giving the baby morphine.

I mean, it's one of the last resorts, but that's one of the ways we do it. So what we don't know about neonatal abstinence syndrome yet - because there's a lot of work going on - is: These are the immediate side effects.

We have also seen some associations with birth defects, like heart defects, gastric defects. We also have had some literature that shows there's defects in hearing, vision, other aspects.

Now, when I was speaking to schools, officials, teachers, parents, oftentimes they would tell me that in 2015, some of those babies that were born in 2006, '07 would be then eight, nine, ten years old and they're getting to a point and they're --

What is happening to the babies now is: These teachers would tell me that "We have these kids," it's called -- you know, opioid babies, they are now being -- "they are not able to control their impulse. They're not able to keep attention. So they're having some version of attention deficit disorder; they're having impulse control issues."

So because that's a problem and teachers' job is to teach, they were referring to the parents -- if there were parents. Because in often cases, these kids got moved around three, four, five times a year in the school system.

And they were often within foster care or the care of grandparents or great-grandparents at times. But then they ultimately end up in the doctor's office, at a pediatrician, and the pediatrician would diagnose them oftentimes - erroneously or let's just say through symptoms -

with ADD, and guess what happens then?

These kids get prescribed another addictive potential drug called Adderall.

So then we basically -- we already know that kids who are born with NAS have a high predilection to get -- to become addicted in the future. And now through the system, we're actually providing them the same drugs that they actually have a further habit with.

So we're actually setting up these kids to fail in life, and this is a huge problem in West Virginia. We're talking about 5 percent of the entire population. It's a huge number. And then a higher percentage perhaps in Cabell County and Huntington.

So all these kids -- we don't even know what the long-term consequences will be. Will they be able to adjust in society? Will they be able to have sustained social interaction and enjoy life the same way as others? We don't know that.

But we do know that there are some short and long-term consequences of NAS.

Q. Has anybody tried to -- you or anybody you know tried to quantify the cost of the effects of

earth that you will find, warm people wanting to chip in and help give you, you know, a shirt from their back, if they can. If they're wearing a shirt --

And they was -- everybody was in as a team, had the best intentions with limited resources, and we were struggling every day to help do everything within the power of our state as well as individuals, their capacity, to find those solutions.

So we did everything possible. We left no corner unturned in order to find solutions. But once again, this seemed to have fallen short in our expectations each time, because it's very difficult - and very inefficient, to be honest - to provide and spend that amount of money when this can be and could have been prevented upstream.

Q. Okay. Now, you talk about -- a little bit about this transition from opioids to heroin, and what I'd like to do is ask you some more questions about that. In terms of heroin in connection with the opioids, is there some chemical somewhere -- why would people take heroin as opposed to opioids?

A. Well, basically heroin -- when you take

street heroin, it breaks down into two compounds and both are active, and one of those is morphine. So heroin is basically nothing but a form of morphine. It is the same chemical release. They're all related. They work through the same receptors, and the body cannot tell one from the other.

And so chemically speaking, you know, you could have synthetic opioids; you could have semi-synthetic; you could have natural opioids. But to the body that needs to feed the need, it's the same compound.

And so chemically speaking, what you write in the prescription pills, again it's the same feed -- the feeding mechanism is the brain. It does not discriminate.

Q. Right. So it's your opinion that heroin -- if someone went to heroin, that would satisfy the need created by an opioid addiction?

A. Absolutely.

Q. All right. In terms of the number of opioid addicts that transitioned to heroin, is there any way for us to quantify in terms of the total number of people that would be moving to

Q. Doctor Gupta, this is Anne Kearse with the City of Huntington and Cabell County as well. I only want to follow up with a couple of things that I believe you testified about today and just make sure I've got the documents or the reports that you issued correct.

MS. KEARSE: Monique, can you pull up the first -- August 17, 2017 document? And I'll mark this as, I guess, Plaintiff's No. 1 for the purposes of this deposition.

PLAINTIFF'S EXHIBIT NO. 1

("West Virginia Drug Overdose Deaths Historical Overview dated August 17, 2017 was marked for identification purposes as Plaintiff's Exhibit No. 1.)

Q. Doctor Gupta, you testified today about an historical overview since 2001 to 2015 of drug overdose deaths. Is that correct?

A. It's, I believe, 2000 to -- yeah, yeah, that's -- thank you for that. Yes.

Q. Okay. And that's -- and that's what -- I just wanted to make sure for the record that this --

MS. KEARSE: Monique, wait a second, please.

Q. -- that this document, cover page "West Virginia Drug Overdoes Deaths Historical Overview 2001-2015" is a report that you were referring to today. Is that correct?

A. That's correct.

MS. KEARSE: And Monique, if you'll go to the second page, just for the record.

Q. This is a report that obviously your name is on there, Doctor Gupta, as the Commissioner for the Bureau of Public Health, the State Health Officer. Is that correct?

A. That's correct.

Q. And you were involved not only in working on the analysis and reported here of this, but you were doing this in the capacity of your role as Commissioner of the Bureau for Public Health. Is that correct?

A. Yes, I ordered the commission of this report.

PLAINTIFF'S EXHIBIT NO. 2

("2016 West Virginia Overdose Fatality Analysis" was marked for

identification purposes as Plaintiff's Exhibit No. 2.)

Q. And then Doctor Gupta, I believe also Plaintiff's No. 2, in your capacity as the Commissioner for the Bureau of Public Health, state of West Virginia, I believe you also testified about a 2016 overdose fatality analysis?

A. Yes, and I have submitted that, I believe, as part of the documents that I was requested to provide.

Q. Okay.

MS. KEARSE: And just for the record, Plaintiff's Exhibit No. 2, is this the report and analysis that you were referring to in your testimony earlier today titled "2016 West Virginia Overdose Fatality Analysis"?

A. Yes.

MS. KEARSE: And Monique, if you'll go to page No. 2 on that.

Q. And that's also -- you appear on that as the Commissioner for the Bureau of Public Health; is that correct?

A. Yes.

Q. And in your -- both of these reports, these

A. I cannot be as certain of that - I can make an assumption - but if there were any fraudulent prescriptions, I could not -- I could not tell you in a verified way.

Q. So as far as assuming that the prescriptions were written by prescribers and did not include fraudulent prescribe -- prescriptions, were the prescribers -- they would have been licensed by the state of Virginia, correct?

MR. COLANTONIO: Object to the form of the question.

A. It is possible, plausible, but not for sure. And the reason I say that is because what I -- we found was that those decedents who went to three or more pharmacies -- four or more pharmacies, were 70 times -- I'm sorry, were 70 times more likely to have died.

What that means is -- so let me repeat that. So it says here, the decedents that were more -- 70 more times likely to have a prescription as four more pharmacies that died.

What that means is because we were sharing data with CSMP with cross border states, some could have obtained it in doctor shopping,

to stand on. It's in the context of an opioid crisis that has transitioned now killing West Virginians from opioid prescription drugs to heroin to cocaine, and we've established that as we went through.

And now to take that out of context and to act like opioid prescriptions have nothing to do with it is unfair and not really in context, so I take offense to that fact that we're taking pieces and trying to cobble those together instead of actually allowing a fair opportunity to be explaining what actually happened in West Virginia.

So I -- that's the piece that I think that is unfair.

Q. Has alcohol use disorder been a long-term -- long-standing challenge in West Virginia?

A. Yes, an alcohol disorder within -- which I will discuss as a very different challenge in many of the states, and we've already talked about today earlier how there will be always a level of population where there will be addictive behaviors.

So now to take that out wouldn't be fair because alcohol -- alcoholism and alcohol challenge did not rise by thousands of percent over

a decade. Opiate prescription drugs and volume of that did rise.

Alcohol did not contribute to killing West Virginians in this way. Opioid drugs did. So it would not be fair to blame alcohol for the sins of the volumes that have called West Virginians.

Q. And just to be clear, Doctor, I'm not trying to do that. I'm just trying to understand the prevalence of alcohol use disorder in West Virginia. Would you agree --

A. But you -- sorry. If you are wanting to do that, then we would be sharing data from CDC, from behavior risk to factors surveyed on the prevalence of binge drinking. We would be in a way different area right now than what we are doing picking and choosing pieces to cobble together.

This is not the type or the veracity of data, I'm -- you know, you can look up and you can see the West Virginia alcohol use data. I have the surveys of those, and I can tell you this is not where you go to look for that data.

Q. So to be clear, you are not sure about the accuracy of the data that is represented in this publication that was published by the West Virginia

Ex D – Deposition Excerpts of Michael Kilkenny, M.D., dated 07/21/2020

Plaintiffs' Supplemental Federal Rule Civil Procedure 26(a)(2)(C) Disclosures

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA

* *

THE CITY OF HUNTINGTON,
Plaintiff,

vs. CIVIL ACTION
NO. 3:17-01362

AMERISOURCEBERGEN DRUG
CORPORATION, et al.,

Defendants.

_____

CABELL COUNTY COMMISSION,

Plaintiff,

vs. CIVIL ACTION
NO. 3:17-01665

AMERISOURCEBERGEN DRUG
CORPORATION, et al.,

Defendants.

* *

Videotaped and videoconference deposition of DR. MICHAEL KILKENNY taken by the Defendants under the Federal Rules of Civil Procedure in the above-entitled action, pursuant to notice, before Teresa L. Harvey, a West Virginia notary public and Registered Diplomate Reporter, the witness appearing via videoconference from Charleston, West Virginia, on the 21st day of July, 2020.

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to that.
Q. How about at present? At present day, which poses a bigger problem?
A. Which -- I suppose it depends on what you're calling a problem. The driver for -- for systemic and deep tissue infections, or HIV risk, or hepatitis C risk, or overdose deaths would be injection drug use.
Q. Okay. Just as a relative percentage of the clients you serve or the people you interact with, what percentage of people at present — you know, ballpark — have their primary drug of choice as an oral opioid versus an injectable opioid like heroin?
A. That's a good question. I might ask that to be more specific, but perhaps my concepts of that might be more specific than your concepts of it.
Q. Well, give me -- give me your concepts, and then later in the deposition maybe we'll look at a few documents, some surveys where people report their primary drug of choice. But if you can just give it to me broadly in your concepts, I'd be curious to hear it.
A. In my concepts, I deal almost exclusively with injection drug users. And I know that the injection drug users use oral and injection drugs. And I have some knowledge of general classes of that use, but I

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don't -- I don't have any great focus on oral drug use.
Q. Why do you have no great focus on oral drug use? Why is that the case?
A. My focus is on preventing the complications of injection drug use.
Q. Is there anybody at the health department that has their primary focus on oral drug use?
A. We have a general focus on oral drug use as a relationship to injection drug use, but no, we don't focus on the oral drug use.
Q. And what is your understanding of the relationship between oral drug use and injection drug use?
A. It is my understanding that the vast majority of people who are injection drug users started as oral drug users.
Q. What is the basis for that understanding?
A. That would be direct interview among people who inject drugs.
Q. Is there anyplace where you -- or the health department saves or stores that information? And I'll just represent to you, because I've not seen it. What I have seen with the Harm Reduction Program is you don't use names, so there's not a lot of individual data

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tracked. And I never saw in some of that data you track looking at whether somebody was a previous opioid user. So do you know if there's any reports you guys have or any datasets that would house the information that you just described?
A. We have information from interview on when people started using drugs and when people started injecting drugs, and that is -- and so we know that interval.
Q. Do you -- do you document these interviews anywhere, compile that broader set of data from the interviews, to come up with certain percentages or anything like that? Or are you just referencing sort of informal communications that you know about when folks come in, say, to your Harm Reduction Program, needle exchanges?
A. No. We have some of that information based on a survey that we have used, what we would consider an intake data sheet, among our Harm Reduction Program participants. But we also have data from -- that's been published with some regard to that, probably not as specific as the date of first use and the delay to the injection. That might be in one of our publications.
Q. Okay. Do you know, to the best of your

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ability, the name of -- you mentioned intake data sheets -- the name of a document -- like if I needed to find the document that shows what you were just describing, the questionnaires or the surveys where folks are asked about current IV drug users or asked about previous opioid use?
Do you know the name of that sort of report or document?
A. You should probably have the -- the intake documents. I would -- I would think that you would have the Harm Reduction intake forms.
Q. So it would have to be for each individual person who came in, like each individual intake form would have that information? Or is that aggregated into a broader report that covers various folks, like all comers, I guess?
A. You're asking me -- my mind is -- because I don't have a specific knowledge of the individual questions like I used to, but I know that we -- another place you would find that data reported, there was a -- there were two reports put out, probably one in 2016 and one in 2017, summarizing that data. And they were presented to the Board of Health, so they would be public, and they include -- I'm pretty sure they include

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regulations governing distributors?
A. I came to have some understanding of the regulations during the 2015 to 2017-18 type of time frame. I did not have an understanding -- I would say I didn't have that understanding prior to 2015, at the distributor level.
Now, I was aware of places that were operating that were prescribing, I would say, probably too liberally to be legitimate, and that some pharmacies were distributing that, and that there were arrangements.
Q. Do you know the names of any of the particular places of business or pharmacies, any details you can add about who those may have been and when they operated?
A. I am aware of -- I'm not sure whether I should say I have firsthand knowledge. I have observational knowledge, and these sites have been named and prosecuted.
Q. Do you recall the names of the sites?
A. Well, the most particular one that I can recall is the Justice Medical Center in Kermit, West Virginia. And the pharmacy, it was my understanding they had a relationship with them to fill those

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prescriptions.
Q. How far is Kermit from Cabell County? I should probably know, but I don't.
A. I'd say, when I drove it, it was 55 miles. I think I'm remembering that. Well, that was -- that was to Ceredo. It may be a little bit more to Huntington. Sixty miles.
Q. Okay. Do you have any basis to believe that pills dispensed from the pharmacy that was servicing Justice Medical Center ended up back in Cabell County or Huntington?
A. I have no firsthand knowledge of that.
Q. Does the Cabell-Huntington Health Department have any access to the Controlled Substance Monitoring Program in West Virginia to track opioid use trends over time?
A. At the -- at the population level, we do not.
Q. I just want to ask about some risks of opioid medications and focusing on the time when you graduated medical school. Were you aware that opioids carry with them the risk of abuse?
A. Yes.
Q. Were you aware at the time you graduated medical school that opioids carried with them the risk

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of physical dependence?
A. Yes.
Q. Were you aware at that time that opioids carried with them the risk of psychological addiction?
A. Yes.
Q. When you first prescribed an opioid medication, were you aware that this medication had a potential to be addictive?
A. Yes.
Q. Were you taught in medical school that opioids had the propensity to be addictive?
A. Yes.
Q. There are -- let me just ask a little bit more about your opioid prescribing. Do you know when the last time you prescribed an opioid was? Even roughly.
A. Did you ask a question?
Q. Yeah. I'm sorry. Do you know when the last time you prescribed an opioid was?
A. Oh, I'm sorry. That would probably have been 2015.
Q. Okay. And how often in 2015 did you prescribe opioids? Was it a common class of medication you prescribed? Infrequent? How would you characterize your prescribing?

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A. I would call it -- well, it was less than half the time, but certainly less frequent.
Q. Did you say it was frequent?
A. I probably wrote a prescription every day, but not to the majority of my patients.
Q. Understood. What opioid medications were you prescribing in 2015?
A. In 2015, we were prescribing -- we were prescribing oxycodone, usually as Percocet. We were prescribing hydrocodone, codeine. I think that Darvocet -- I think Darvocet was off the market by then.
Q. How about any extended-release opioids like OxyContin or one of those -- one of those not-immediate-release variants?
A. Say again.
Q. Sure.
A. Long acting?
Q. Correct.
A. Yes. Okay. Yeah. I was -- I was also a hospice provider in 20 -- I'm not sure exactly when that contract ended. It might have been early 2015. But certainly 2014, I was prescribing long-acting morphine, long-acting oxycodone, and even methadone.
Q. How about outside of the hospice setting, in

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A. -- I think that's probably consistent with the late '90s.
Q. The marketing you just described, what -- what group or what sorts of entities were responsible for that marketing?
A. Well, my only experience with that would have been the OxyContin marketing that was occurring.
Q. So marketing by a pharmaceutical company; is that fair?
A. That's correct.
Q. And what was the result of the marketing, as you saw it in your own experience?
A. I think that we saw direct increases in prescribing, and we certainly began to doubt our understanding of the condition of addiction, and we began to reassess that, but I'm not sure we reassessed it properly.
Q. So in -- describe that to me, what you mean by "we began to doubt." What sorts of doubts did you have and when did the doubts creep in? Just explain that a bit more, if you can.
A. I think that we understood -- while we would have disputed pain as a vital sign, we would recognize that pain was a driver in seeking medical care and that

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it was under-treated or underappreciated by the providers. So I began -- I think that we began to look at things differently, and that would be a positive outcome. The negative would be, and this would be from my own experience, in beginning to doubt the training that I received that this drug was addictive, then believing what has probably been proven to be a faulty conclusion from research, underestimating the addictive nature of this class of drugs. And when we underestimated its addictiveness, we made an error.
Q. And the "we" in that is prescribers in general?
A. Yes. I'm speaking certainly for myself, but other like-minded physicians that drew those conclusions.
Q. And those conclusions you just described in that answer about doubting what you had learned previously about the addictive nature of the drugs, and that these drugs could be used more broadly, did any distributor -- any of the defendants in this case play any role in changing the way you viewed opioid medication when you compare the time you were in medical school to the time you were discussing with the drug reps coming in and providing the different messaging

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about the drugs?
A. I'm not familiar with the role of distributors in that so I -- I have no firsthand knowledge of any distributor being involved in that.
Q. Do you have any knowledge of heroin use within Cabell County dating back prior to your tenure with the department?
And what I'm trying to get at is, you know, for example, New York City, there's a major heroin problem in the '60s and '70s. Millions of people using heroin. Do you know if there is any historical heroin use in Cabell County that happened before the current issue with heroin that's part of this current opioid epidemic?
A. Yes, I do know that it was used and that -- and I know that from treating people with complications of its use dating back into the 1980s.
Q. Do you know at what levels heroin -- excuse me, heroin was used in the 1980s compared to present day?
A. I do not.
Q. Do you know whether there was a time period where the heroin use from the '80s subsided and it was no longer an issue?

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A. If you're talking about Cabell County, I don't know.
Q. So was there always some period of heroin use in Cabell County? Well, let me back up.
OxyContin, the medication you described of folks coming in to detail you about it in the 1990s, wasn't on the market in 1980. Is that correct?
A. That's correct.
Q. But there was still some underlying problem with heroin use in Cabell County, despite the absence of OxyContin. Is that correct?
A. There was heroin use. There was injection drug use prior to OxyContin.
Q. And do you know if there was any cyclical nature in that intravenous drug use, whether there was a period of time where the rate was higher or it dipped down and got better, anything like that, historically speaking, prior to OxyContin?
A. I don't know any data from Cabell County that, you know, gives an indication of that. But there has been national data published, and I believe that's what you're speaking about.
Q. Yeah, well, do you know what that national data says about the rates of heroin use over time, even

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dating back prior to OxyContin's introduction to the market?
A. I do believe that it has cyclical characteristics, but I can't cite them.
Q. And do you know what steps were put into place that put heroin use on a downward trajectory during the time period prior to OxyContin's introduction to the market?
What public health interventions took place to tamp down heroin use?
A. Prior to OxyContin, I am aware that harm reduction practices started, probably around the early '90s, or around maybe as far back as the late '80s. That was largely driven by attempts to reduce HIV, I believe.
Q. What are the illegal opioids right now that are contributing in any way to the opioid epidemic within Cabell County?
A. What are the legal opioids?
Q. No, no, no. Just any opioids. Any opioids that are contributing in any way to the current problem within Cabell County.
A. I can tell you what we know about the drugs that are being used by the injection drug users in

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Cabell County, to -- at least to some extent, how we -- what would you like to know about that?
Q. Sir, I would just like to know what -- what -- what drugs are they, in particular? And I'll just ask you about, in particular, heroin, fentanyl, carfentanil are the three that I was curious about whether you believed they are currently contributing to opioid-related issues in the county?
A. Currently?
Q. Yes.
A. Yeah, I don't know how much carfentanil there is now. There's still fentanyl. There's some heroin.
Q. When you say "some heroin," has heroin use declined recently?
A. It's my understanding that it has. It may be increasing again. There was a time, probably in 2016, 2017, that heroin was difficult to obtain in its pure form. It was either adulterated with fentanyl, or actually was only fentanyl. And carfentanil really had its appearance in 2016, and it may still actually -- I actually haven't looked at the -- at the toxicology data on that for 2019. Although I have gotten a set of it, I haven't looked at it in any great detail.
Q. What -- what steps has your health department

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taken to address illegal fentanyl?
A. Illegal fentanyl?
Q. Yes.
A. We have the Harm Reduction. We've educated about illegal fentanyl. We have also put out public education regarding illegal fentanyl. We have worked pretty diligently to attempt to get -- to encourage people who are using -- well, who are injecting drugs to stop injecting drugs and to receive treatment for their substance use disorder. We've been very active in that.
Q. And has it been successful?
A. That would be a better question for epidemiologists for a time from now to really fully evaluate that, but I'm going to say yes.
Q. And why do you say yes? Why do you believe that your intervention has been successful?
A. Well, we're looking at overdose data in particular as an indicator of success, and we see that in Cabell County, from 2015 to 2017, overdose deaths rose, but from 2017 through 2019, they have declined significantly. And that trend had not been observed in all West Virginia counties. In particular, there are some other counties that are reasonably similarly sized that do not have the programs in place, and we've seen

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their levels remain constant.
Q. When you say "decline significantly," what does that -- what does that term "significantly" mean?
A. A decrease of 25 to 40 percent.
Q. And this success was achieved prior to, or I guess -- let me back up. The plan we talked about earlier that you met with attorneys to discuss, the success that the health department had in dealing with fentanyl abuse, that was -- that was done without anything that's in that plan. Is that fair to say?
A. I think that that's fair to say. Look, what we planned and what we made, because I served on that committee, is we made -- I'm trying to think of the word. I blocked on it right now. I'm sorry to have lost that word. But in any -- in any epidemic or natural disaster, you have an intervention phase and then you have a -- a rebuilding phase after all the --
Q. The resiliency Plan?
A. The Resiliency Plan. And you have a resiliency plan that should be created for any event, whether that would be Hurricane Katrina in New Orleans, it would be appropriate for the planners to make a resiliency plan of how you rebuild after that, develop a budget and start making the -- setting up the programs.

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So, as we have seen in Cabell County, this decline, which we believe to be the result of a comprehensive set of interventions, including increasing the capacity for treatment of opioid use disorder, Harm Reduction plays a role. Our naloxone distribution plays a role. A lot of different agencies played roles in this comprehensive plan.

Once we see that numbers are coming down and we perceive that we have dealt with the maximum effects, it's appropriate to build a resiliency plan. And so that's what we built in that -- in that program.

Q. So you said, "When we perceive we've dealt with the maximum effects."

Do you believe you're at that point now?

A. Yes, I believe so.

Q. What does that mean, exactly?

A. I think it would be -- I hope to God that we have seen the worst of the overdose deaths.

Q. So you're coming down the slope from overdose deaths; correct?

A. And we are doing that in a sustained fashion consistent with the efforts that we put into it. So that's why I feel like we're having that effect. Again, that will be -- as you mentioned earlier, the cyclical

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natures of things, it's easy for people who are involved to overestimate their influence. Later on, better statistical public health analysis can be undertaken and -- and those root-cause-effect type of issues can be better described.

Q. Have you -- do you know now what the rate of overdose is presently of heroin?

A. I do not.

Q. Do you know how it compares to the rate of overdose prior to the introduction of OxyContin, you know, back in the previous heroin epidemics?

A. I do not.

Q. When did your -- let me ask you this: Do you believe there is still presently an opioid epidemic within Cabell County?

A. Yes.

Q. So when you said you have reached maximum effect, what does that mean? Is it -- is it achievable to completely eliminate the opioid epidemic?

A. I'm not sure that we can eliminate the disease, but we can reduce the numbers of cases; we can reduce the harms associated with the -- with the use.

Q. And is that what you're saying, you think we've reached the maximum level of effect you're going

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to have in that department?

A. I probably meant to say that we've reached the maximum harm that it -- the indication of the worst time when the most people were injured and died, we believe that that might be passed.

Q. I understand. So you view that sort of the worst is behind you, in other words?

A. I hope so. I thought I saw that before, but ...

Q. When did you think you saw that before?

A. I thought I saw that in early 2016. That was before fentanyl became the primary drug and carfentanil was introduced.

Q. And fentanyl, carfentanil are more potent than heroin; correct?

A. They are.

Q. And fentanyl and carfentanil were leading to overdoses for people who, you know, would take heroin and then have fentanyl and their respiratory system couldn't deal with it. Is that -- is that accurate?

A. They died of overdoses at a higher rate because of the more potent, and then also because of shifts that fentanyl is injected more frequently than heroin, and then the introduction of the injection of

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methamphetamine, which can be injected even more frequently than that.

More frequent injections leads to more blood-borne pathogen transmission due to needle sharing. So not only overdose deaths but also the increase -- or the outbreak that we had in HIV all associated with injection drug use and tied to changes and the evolution of the opioid epidemic.

Q. We're going to talk about the Resiliency Plan later, but I wanted to follow up on something. You mentioned that, you know, after a disaster like Katrina, for example, it's appropriate to draft a resiliency plan. Did you review any other existing resiliency plans before sending out the draft of the plans for Cabell?

A. I reviewed the concepts of it to be included in our Resiliency Plan, but I'm not the author of the Resiliency Plan, so ...

Q. Who is the author?

A. The School of Medicine, the -- I always mess up their name, but Division of Addiction Sciences. I would say specifically, Dr. Petrany is the author.

Q. Okay. Up at Marshall?

A. At Marshall University.

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contributing factor to the opioid epidemic in Cabell and Huntington?
A. I would say that's true, yes.
Q. How about the existence of pain as the fifth vital sign? Is that something that you saw increase -- lead to an increase in prescribing of opioid medications?
A. I think that's a harder question, but as we look at -- if I'm looking at that from a public health lens and that it would be a policy that increased one thing or decreased another, I would say that it contributed, yes.
Q. Are there any other contributing factors to the opioid epidemic? Or -- strike that.
Is there anything else, any other factors that we haven't discussed, that you believe contributed to the opioid epidemic in Cabell or Huntington, such that you would testify at trial?
A. You can ask me things that I have better firsthand knowledge of. You did not ask me about any role of the DEA, or the FDA, or oversight issues that I don't have a really good firsthand knowledge of, but one would have to suspect that there are other factors that I really couldn't say I know one way or the other.

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Q. So, to state it differently, other than what we've discussed already in this deposition, you are not going to testify that there are other factors that contributed to the opioid epidemic in Cabell or Huntington; is that correct?
A. I would have to say that there is the possibilities that someone else would ask me another question that I would -- I would say that there are other factors that we -- that -- I would say that what we have discussed is probably not an exclusive list --
Q. Okay.
A. -- as to factors that contribute.
Q. I'm just trying to get from you what you believe the list is, the exclusive list. So what other -- you mentioned the DEA.
A. I would not be surprised to learn that -- that oversight and violation of other laws contributed -- that a failure of oversight and the violation of the laws regarding distribution contributed. I am not an expert on that, but I would not be surprised to hear that.
Q. Okay. So you don't have any firsthand knowledge, for example, of whether or not the distributor defendants in this case engaged in any

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violation of any duty, such that they are a contributing factor to the opioid epidemic? Is that fair?
A. It would be fair for me to say that I don't have firsthand knowledge of that. That is not my jurisdiction.
Q. Okay. Do you recall a period of time or an event, say, in August of 2016 where there were 27 heroin overdoses in four hours in Cabell?
A. You're talking about August 16th?
Q. Eighteenth, I believe, maybe. Or maybe the article is dated the 18th. Let me pull it up. I'll pull it up as an exhibit, if you hold on a minute.
A. I'm being coy. I do remember that event.
Q. I knew you would. And as soon as I doubted you on the date, I said, I'd better clam up, because I bet he knows better than I do.
A. I know where I was when I got the call.
Q. So that event that happened in August of 2016 --
A. Now, we had published on that event, so there is public knowledge of what we learned from that investigation.
Q. And you were quoted in one article, and I'll just -- I'll mark this as an exhibit.

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It's Tab 232 for you, Doctor.
KILKENNY DEPOSITION EXHIBIT 2
[A CNN Health article dated August 18, 2016, was marked for identification purposes as Deposition Exhibit 2.]
A. I've got the article open.
Q. Yeah, it should have a big "CNN."
A. I'm not specifically familiar with this, so I'll be reading it.
Q. Sure. Sure. And what I want to draw your attention to is on the fourth page, you're quoted as saying: "I can't speak directly to this case, but we have been preparing for heroin laced with elephant tranquilizers, which is the latest thing communities close to us are dealing with."
THE DEPONENT: Okay. Yeah.
Q. Is that -- what is an elephant tranquilizer? Is that carfentanil?
A. That's carfentanil.
Q. And is carfentanil the product that was present in the heroin that led to this mass overdose event?
A. Yes, it was. And I didn't know that at that time.

Ex E – Deposition Excerpts of Christina Mullins, dated 07/14/2020

Plaintiffs' Supplemental Federal Rule Civil Procedure 26(a)(2)(C) Disclosures

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA

* *

THE CITY OF HUNTINGTON,
Plaintiff,
vs. CIVIL ACTION
NO. 3:17-01362
AMERISOURCEBERGEN DRUG
CORPORATION, et al.,

Defendants.

_____

CABELL COUNTY COMMISSION,

Plaintiff,
CIVIL ACTION
NO. 3:17-01665

AMERISOURCEBERGEN DRUG CORPORATION, et al.,

Defendants.

* *

Videotaped and videoconference deposition of CHRISTINA MULLINS taken by the Defendants under the Federal Rules of Civil Procedure in the above-entitled action, pursuant to notice, before Teresa L. Harvey, a Registered Diplomate Reporter and West Virginia notary public, the witness appearing via videoconference from Charleston, West Virginia, on the 14th day of July, 2020.

5 minutes. And they can pick any one of the witnesses that they want to choose.

Q. Okay. All right. So this was the written statement submitted. This is just, I guess, seven months ago, thereabouts, to the day, January 14, 2020. And this was submitted by you to the committee?

A. Yes.

Q. Okay. And subcommittee. Okay.

Well, if you could turn to Page 2, in the first paragraph you state that: "The resources provided by both the state and federal governments have allowed West Virginia to transform the state's response to the opioid crisis."

Do you still feel that is true?

A. Yeah. There is a lot of evidence to support that we've been able -- we've accomplished a lot, despite the circumstances.

Q. Okay. Can you -- we may end up going into some of the details here, and I'll try not to be too repetitive, but can you just explain to me now what -- you say that you've accomplished a lot. Can you explain to me what you've accomplished?

A. Sure. We have been able -- so, one of the big things to stick out was there was 197 residential

treatment beds a few years ago. That's all that we had in the entire state. Medicaid did not pay for residential treatment. The State of West Virginia invested other drug settlement funds into an account called the Ryan Brown account. That money was divvied out, and now we have, not just because of that investment but because of statewide interest and because of Medicaid's changes in payment, we have -- and I don't have the exact number, but it's around 850 residential treatment beds now as opposed to just 197, so that really does expand access.

We've been able to increase the number of prescribers for medication-assisted treatment by quite a bit.

We've distributed over 10,000 doses of naloxone to local health departments.

As you -- we've discussed earlier, the number of opioid prescriptions in West Virginia has decreased. We have really been able to also increase the number of treatment programs for women and children so that mothers and babies -- so that treatment can start with prenatal care and families be followed one to two years post-delivery.

We also have residential treatment

programs for mothers and babies now where moms can enter treatment and with their -- and keep their children with them and avoid foster care.

We have also established neonatal abstinence centers in West Virginia. We have two of those, I believe. So just the scope of -- of the work that's been done, the number of Quick Response Teams that have been added to the state, the number of treatment programs, the infrastructure that we've been able to build has really changed the system of care for West Virginia.

Q. Okay. Yeah, I believe you even say -- this is at the -- it's really the last full sentence on the page where you have stated some of the numbers that you've just testified to. You state that: With the Government's help -- this is in the fourth paragraph down, the paragraph that starts with "It's no secret." I believe it's the second -- third sentence you say: "With your help, West Virginia has reduced overdose deaths for the first time in 10 years. Opioid prescriptions have decreased by 48 percent. Opioid doses have decreased by 50 percent. Naloxone prescribing has increased by 208 percent. And additionally, we have distributed over 10,000 doses of

Q. Okay. On Page 7 -- I'm sorry, on page -- yeah, on Page 7, second full paragraph down, I want to make sure this is just as of this year. You made note that, quote: "Every county and community in West Virginia has been impacted by the opioid crisis, with all able to document some level of need."

As we sit here today, is that a fair point that every community within the state of West Virginia has suffered at the hands of an opioid crisis?

A. Yes.

Q. And Commissioner Mullins, you testified today about some of the programs that have been put in place in response to the crisis. Is that correct?

A. Yes, I did.

Q. Would you agree with me that, as we sit here today, there's still a lot to do to address the current opioid crisis?

A. There is still a lot of work to do. We still have people who need to access treatment. We have children and families who are impacted by the crisis and we have kids that we want to make sure don't follow that same path of addiction.

Q. So, as we sit here today, we have not eradicated the opioid crisis in our communities?

A. No. We still have people needing treatment. We still have people experiencing fatal overdoses and nonfatal overdoses.

Q. So it would be fair to say we still have a large population in our communities who are addicted to opioids?

A. We still have people who are addicted to opioids. I don't -- without data in front of me, I would be reluctant to add the descriptor.

Q. That's fair. That's fair.

And Commissioner Mullins, you testified that there was some optimism that overdose deaths were going down in 2018. You're still concerned about a rise of opioid death rates as we sit here today in 2020?

A. I'm even concerned about what the data is going to show in 2019, and then again into '20, given the pandemic and what we're seeing across the nation.

Q. And is part of that reason, although overdoses were going down, the fact that you may have overdoses in 2019 or 2020 is because there are people addicted to opioids?

A. Yes. And I am worried about changes in what is available on the market as well, the fentanyl being available in cross -- in different drugs and the

different things that are happening on the street level concerns me greatly.

Q. Commissioner Mullins, you testified about the distributions of naloxone have increased by 208 percent and, to date, as of that testimony, you had distributed over 10,000 doses of naloxone to local health departments.

Do you recall that?

A. Yes.

Q. What is naloxone?

A. Naloxone is an overdose reversal drug that when someone is experiencing an opioid overdose it can be administered to reopen their airways and so they can get treatment. Or, sometimes, it will completely reverse it but they refuse transport for treatment.

Q. It's a lifesaving treatment for someone that overdoses?

A. Yes.

Q. And is it safe to say that communities are still facing overdoses and that naloxone is preventing them from dying?

A. In some cases, yes. We've really increased -- even over the last three months, tried to increase the amount of naloxone available in communities.

A. Yes, that was the highest rate as of the date of this testimony, yes.

Q. And those rates are still increasing, even though there have been programs in place; is that correct?

A. In 2018, the rate went down to 52, 53, I don't remember, but it dropped a little bit, which is why I felt a little bit more optimistic going into -- in the data, we saw a little more optimism. It had decreased a little bit for the 2018 death rate. About 2017 was the highest recorded at that time. We will see -- we're very interested and watchful for the 2019 data that should be released in the next few months.

Q. And you also note that the loss of life is not the only impact of the crisis?

A. Correct.

Q. And I think you did testify that other things within the communities greatly impact the communities because of the opioid crisis, such as NAS?

A. Yes. We're very concerned about the impacts to children and families, particularly for women who are pregnant and with a substance use disorder and/or may be, you know, in a relationship with someone with a substance use disorder. It affects that family's

ability -- may affect that family's ability to stay together. And we know that kids do better, families do better, when they're together. So we really worry about infants being separated from their parents in that first year of life, and then the subsequent downstream consequences of foster care involvement and just that breaking apart of that family unit.

Q. And in your testimony you also note that the NAS -- West Virginia led the nation in NAS. Is that correct?

A. Yes.

Q. And in regards when you just testified about foster care, you testified that foster care placement in West Virginia has risen 4,129 children from September 2011 to 6,895 in September 2019, an increase of 67 percent; is that correct?

A. Yes.

Q. And then you also mention that, in addition to loss of life and impact of families, the State has also seen an increase in infectious diseases.

Do you recall that?

A. I do.

Q. And is that still today you're seeing the opioid crisis include infectious diseases, including

hepatitis A and other diseases?

A. Yes.

Q. And all these impacts to the crisis still continue today, one way or the other, throughout the state of West Virginia?

A. We are still seeing these impacts, yes. With the caveat that, you know, as today COVID is changing things somewhat with some of the data. I do expect some of the data to change a little bit as a result of the pandemic, so, not these -- these things are still happening in communities. Overdoses are still happening. There's still infectious diseases in the communities as a result of us sharing needles and other behaviors associated with drug use.

Q. And Commissioner Mullins, even though the death rate may fluctuate, the communities are still faced with the devastation caused by the opioid epidemic?

A. We are going to be facing this for quite a while. And children that have lost their families of origin because of substance use disorder, the trauma that will happen as a result of that. We don't know quite fully the consequences of any or some of the other things that we could be facing down the road as a result

of this. It's going to impact generations of families. And even if we could cure all of the addiction, we're still going to be dealing with the mental health trauma and some of the other things that are going to be residual effects of the crisis.

Q. And would it be fair to say it's going to mean additional sources of funding and dollars in order to deal with these public health crises in the future?

A. It's likely going to need resources and I -- I am concerned about financial resources long-term, because, as I noted earlier, and I don't know what the grant profiles are going to look like in 3 years, 5 years, 10 years down the road.

But we're also going to need humans who can participate in these workforces and be able to provide the supporting services, too. So it's -- it's a little bit of a -- there's a two-prong problem, from my view.

Q. And I thank you, Commissioner Mullins. I wanted to make sure in the testimony you weren't suggesting that the state of West Virginia has enough money to eradicate the opioid public health crisis as it exists today. Is that fair?

A. No, my testimony indicated that, for the first

Q. And I think what I understand what you're saying is that there is a key concerning that the grants will soon to be limited in time and sustainability in order to deal with future issues as a result of the opioid crisis?

A. Yes. I see this as a long-term concern. We're going to need to make long-term investments. As I -- you know, recovery relapse is a part of what we expect, so just because someone is in recovery right now and today is no guarantee that they might not relapse tomorrow or down the road. And so we have to plan to have those resources available in the future to be able to support people and to continue to support them through -- through recovery.

Q. And Commissioner, in addition to this, the State is doing what they can to help with the opioid crisis. Cities and communities have their own obligations and assessments of what they need to do for their adjusting to the opioid crisis. Is that fair?

A. Can you please repeat that? I'm sorry.

Q. Okay. I'll change it a different way. Although the State's been assisting various communities in their opioid crises, the communities themselves still are dealing with a crisis that they need to fund and

Q. And without going through the whole report, is it fair to say that the report does include an executive summary, a summary of key findings, and then the analysis that you and your colleagues put together for this report?

A. It does. That's the executive summary, and then we went through lots of tables and descriptions of tables.

Q. Would it be fair to say that the prescription opioids had a significant impact on the overdose deaths in the state of West Virginia from your analysis?

A. Yes, they did.

MS. KEARSE: Commissioner, I have no further questions. I appreciate your spending the day with us today.

MR. GARY: I have no further questions, just with the caveat that I expressed earlier there was some information that we discussed that we will be looking into. We reserve the right to ask some follow-up questions.

MR. FRANKS: This is Ray Franks for Cardinal. This deposition was cross noticed in the MDL, most recently by Plaintiffs' Cross Notice of Deposition No. 2, filed July 10, 2020. In light of that, Cardinal

Ex F – Deposition Excerpts of Lyn O'Connell, Ph.D., dated 07/31/2020

Plaintiffs' Supplemental Federal Rule Civil Procedure 26(a)(2)(C) Disclosures

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA

* *

THE CITY OF HUNTINGTON,

Plaintiff,

vs. CIVIL ACTION
NO. 3:17-01362

AMERISOURCEBERGEN DRUG
CORPORATION, et al.,

Defendants.

_____

CABELL COUNTY COMMISSION,

Plaintiff,

vs. CIVIL ACTION
NO. 3:17-01665

AMERISOURCEBERGEN DRUG
CORPORATION, et al.,

Defendants.

* *

Videotaped and videoconference deposition of LYN O'CONNELL taken by the Defendants under the Federal Rules of Civil Procedure in the above-entitled action, pursuant to notice, before Teresa S. Evans, a Registered Merit Reporter, all parties located remotely, on the 31st day of July, 2020.

Quality Insights to support Healthy Connections.

Oh, the MOMS grant. we have -- we are the implementation Institute for CMS, which is the center for Medicaid services, for the state MOMS grant, Maternal Opioid Model which is to extend the fourth quarter of -- fourth trimester to engage -- continue to engage women in treatment the year after delivery with substance use.

Q. Any idea how much that is a year?

A. Not enough. The total award is a couple million, but it's mostly to the health centers around the state.

Q. Okay. Are some of those health centers in Cabell or Huntington?

A. Yes.

Q. Do you know which ones?

A. Cabell-Huntington Hospital, Valley Health System and our project of Healthy Connections.

Q. Okay. What's -- can you just tell me what Healthy Connections is real quick?

A. Healthy Connections is a collaboration of about 20 organizations that started as a community-based organization to address the gap and needs of pregnant women with substance use

disorders as they often fall through the treatment gap because they don't rise to a particular level of intervention and care but they are, obviously, struggling at a very high rate, and then cause intergenerational struggles, and so we --

Approximately 20 organizations came together, all of whom work with that population, to develop a model of intervention, which is our family navigators and our certified peer recovery coach who comes alongside mom and family either prior to delivery or post-delivery and provides emotional and therapeutic support and helps connect them to other types of services that they might need.

Q. Okay. And Healthy Connections operates within Cabell County?

A. It does. It was a purely community-based organization until 2018 when the steering committee voted to allow it to move in-house for -- into Marshall Health.

Q. Okay. I know we went through a lot of numbers. But if you could estimate for me approximately like how much -- well, let me back up.

implementation, grant writing, development and to a much smaller degree, the research component.

Q. And that work involves individuals and families struggling from substance use disorders and addiction, including opioid addiction?

A. Yes.

Q. And based on your collective experiences again within the community and the professional work that you've been working with in the community and your observations, I'd like to ask a couple of questions. Is there an opioid-related public health epidemic in the City of Huntington and Cabell County?

MR. JONES: I'll object to the form of the question.

A. In my personal experience, the current data that is released indicates that we have an opioid crisis in Cabell County and the City of Huntington.

Q. And Doctor O'Connell, how would you characterize the impact of the opioid crisis or epidemic on Cabell County and the City of Huntington?

A. Could you clarify the question?

Q. In your experiences and your professional

work, how would you describe the opioid crisis in the City of Huntington and Cabell County?

A. I would say that it affects every individual who lives or works in the city and County and larger region as a result of the significant loss of human life, the obvious overdoses that occur, unfortunately, in public, the effect on the legal and housing system, the overwhelming effect on the health care system and first responders, the effect on the education system and the impact it has on the financial standing of individuals within the community.

Q. Are there effects particularly on the families of children born exposed to opioids?

A. Yes. We see with -- in my professional experience at Project Hope, I see the negative effects of infants who are born with substance exposure either diagnosed as neonatal abstinence symptoms or neonatal withdrawal symptoms, and we experience the necessary level of care that is to help mom overcome her substance use, care appropriately for that child and the level of intervention that is necessary just even in the short window that we work with them professionally

at a program like Project Hope or through Healthy Connections.

Q. Has it been fair to say that the opioid addiction has greatly impacted children and families and their ability to stay together?

A. Yes.

Q. And how has -- you and within your work at Marshall and with your work with the various organizations that you mentioned today, what is part of the goals of your programs in regards to family and children matters?

A. Our work within Project Hope and Healthy Connections and other services that touch children and families specifically is to work on reunification when at all possible, to reduce the significant burden that has been placed on the foster and adoption system and Child Protective Services and to try and promote both a safe and healthy reunification for that family, which we know in the research is often best, and also our work is to often try and support that family in the potentially the lowest level of care necessary for them to both survive and thrive.

Q. And Doctor O'Connell, through your work

within the City of Huntington and Cabell County, have you seen and experienced members of your community facing addiction and their struggles to work through their addictions to attempt to lead a normal, healthy life?

MR. RUBY: Object to the form.

A. Yes, that's something -- yes, that's something that I'm familiar with.

Q. And can you just tell us a little bit about that, knowing that we could be here a long time with that. But your -- from your overview and the impact on persons addicted to prescription opioids and resulting addictions to other opioids, what are the things that you've witnessed and experienced in attempts to work professionally to address?

MR. RUBY: Object to the form.

MR. MAHADY: Object to the form.

A. I would state that we -- our experience has been to attempt to -- that we see the negative effects of individuals who lose their lives as a result of an opioid overdose and the effects of the lack of Narcan or some other life-saving intervention.

We see individuals who cannot get out

of the cycle of addiction because of, you know, the -- how addictive the chemical brain response is to the substance that they're on and therefore the difficulty in engaging them in effective treatment.

We see lack of access to treatment when an individual with a substance use disorder wants it, because we know we have a very short window to actively engage that person before they go out and, you know, unfortunately play a game of Russian roulette with the substance that they're using, and then we work to try and ensure that they have immediate and appropriate access to treatment of the necessary level of care with the lowest barriers.

And unfortunately, we know there to be an overwhelming amount of barriers, including transportation, insurance costs, child care, what to do with their child if they go into residential, wait lists and capacity overall.

Q. And Doctor O'Connell, I've sometimes heard and I think within speaking to many members of the community and obviously reading various writings about the community, there's been a characterization that the impact of the opioid

Ex G – Deposition Excerpts of Stephen Petrany, M.D., dated 08/06/2020

Plaintiffs' Supplemental Federal Rule Civil Procedure 26(a)(2)(C) Disclosures

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA

* *

THE CITY OF HUNTINGTON,

Plaintiff,

vs. CIVIL ACTION
NO. 3:17-01362

AMERISOURCEBERGEN DRUG CORPORATION, et al.,

Defendants.

_____

CABELL COUNTY COMMISSION,

Plaintiff,

vs. CIVIL ACTION
NO. 3:17-01665

AMERISOURCEBERGEN DRUG CORPORATION, et al.,

Defendants.

* *

Videotaped and videoconference deposition of DR. STEPHEN PETRANY taken by the Defendants under the Federal Rules of Civil Procedure in the above-entitled action, pursuant to notice, before Teresa S. Evans, a Registered Merit Reporter, everyone located remotely, on the 6th day of August, 2020.

there is some evidence, some real evidence, that things are actually getting worse again.

Q. With respect --

A. Going in the wrong direction.

Q. With respect to 2018, which is the time period that Doctor Gilbert's citing here, does 41 percent seem like a reasonable number to you?

A. I think I recall that number as being what was being stated at the time publicly.

Q. And there are some -- in the next paragraph, there's a list of bullet points that includes some of the components of Doctor Gilbert's proposal. And I believe that some of these are similar to what ultimately was included in the Resiliency Plan. The first one is "the building of a comprehensive research and treatment center."

A. Uh-huh.

Q. Does that appear to be similar in concept to the Addiction Sciences Institute that was ultimately included in the plan?

A. Depends what you mean by "similar." There's not -- the Resiliency Plan does not call for a treatment center. Yes, research; yes, education; yes, community engagement. But

Q. What was his input?

A. Before the meetings, I met with some individuals individually. I thought it might not be easy for them to make it to the meetings, but also their input, I thought, was important for the team.

Among those five or six people that I met before we had our first meeting to get their input and to get their insight was Doctor Gilbert. I sat and met with him for about maybe a half hour, 45 minutes to get his thoughts on and contributions to the plan.

Q. And what were his contributions?

A. Well, it -- I don't have notes from that -- from that meeting with me. So I cannot outline specifically what they were.

Q. Did you take notes --

A. I probably took some notes, but I don't know that I kept them. I'm sure I didn't unless you have them, because all my notes, you have. But I don't recall whether I still have them or not. So you would know better.

Q. Do --

A. The main thing I recall from his meeting

was his understanding that it needed to be a community-based and supported plan, and he thought that, of course, from his perspective, that Marshall University needed to be a major element in terms of being involved in any solutions.

Q. Why did he feel that it needed to be community-based and supported?

A. Why? I don't know. You'll have to ask him.

Q. Did you agree with that?

A. Yes.

Q. Why?

A. Because that makes for better programs and more effective solutions.

Q. Was it important to the Resiliency Plan process that it was community-based and supported?

A. It was to me.

Q. And do you think that the community-based process used in the Resiliency Plan in fact made for better programs and more effective solutions?

A. Ask the question again. I'm sorry.

Q. Do you think that the community-based process used in the Resiliency Plan in fact made for better programs and more effective solutions?

A. It made for a better plan, yes.
Q. The plan wouldn't have been as good, in your opinion, if you hadn't used the community-based process that you did; is that correct?
A. Yes, and that's why I approached it from that direction.
Q. Let me ask you to open Exhibit 27A.

PETRANY DEPOSITION EXHIBIT NO. 27A

(E-mail from Maiolo to Petrany and various other recipients Re: Updated Resiliency Plan Draft dated 7-26-19 with Resiliency Plan Framework attached (MARSHALL_FEDWV_00065554-579) was marked for identification purposes as Petrany Deposition Exhibit No. 27A.)

A. All right.
Q. Do you recognize this document?
A. Do I recognize it? Do I remember it? No, but I will read it.

Okay.

Q. You've had a chance to read it now?
A. Yes.

whether or not these patients that are addicted to opioids began at the outset with prescription opioids?

A. I have a relatively small practice, and it would be hard for me to extrapolate from that with regard to that particular question in my personal practice.

Given my other responsibilities as chair and educator, my practice is -- is rather small.

Q. So based upon your overall experience with your responsibilities, do you have an opinion as to whether or not prescription opioids are a gateway to the initiation of heroin use?

A. They are for some.

Q. All right. Tell me about that.

A. Well, I mean, the -- what we've discussed already. At times -- I mean, when -- with the overprescription of opioids to patients and then the legislative tightening down of the circumstances under which opioids could be prescribed, many people who are now addicted to opioids turn to street drugs - heroin and others - to satisfy their addiction.

That often leads to overdose and death.

Q. So when somebody is addicted to prescription opioids and then is seeking to fill that void, why is it that they go to heroin and not tobacco or alcohol or ginger snaps?

A. Because none of those satisfy the physiological need and craving that is experienced with withdrawal from opioids.

Q. So why does heroin respond to the withdrawal symptoms of prescription opioids?

A. Well, it's an opioid, so it -- it satisfies the need for an opioid. I can't say specifically why heroin. I am told -- I -- you know, I -- my understanding is that it was relatively inexpensive on the streets and available, I guess.

Q. Based upon your experience and roles in our community, do you believe that addiction to opioids is presently a public health crisis in Huntington/Cabell County, West Virginia?

A. I certainly think it's a public health problem, yes.

Q. What about abuse of opioids?

A. I'm sorry, what's the distinction between that and what you said before?

Ex H – Deposition Excerpts of Kevin Yingling, dated 07/24/2020

Plaintiffs' Supplemental Federal Rule Civil Procedure 26(a)(2)(C) Disclosures

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF WEST VIRGINIA

* *

THE CITY OF HUNTINGTON,

Plaintiff,

vs. CIVIL ACTION
NO. 3:17-01362

AMERISOURCEBERGEN DRUG CORPORATION, et al.,

Defendants.

_____

CABELL COUNTY COMMISSION,

Plaintiff,

vs. CIVIL ACTION
NO. 3:17-01665

AMERISOURCEBERGEN DRUG CORPORATION, et al.,

Defendants.

* *

Videotaped and videoconference deposition of KEVIN YINGLING taken by the Defendants under the Federal Rules of Civil Procedure in the above-entitled action, pursuant to notice, before Teresa S. Evans, a Registered Merit Reporter, all parties being located remotely, on the 24th day of July, 2020.

Hall, speaking about overdoses in West Virginia.

And you know, that's in the -- that's in the '04/'05 -- I believe, '04, '05, '06 time frame. And you know, give me a little grace, but you can scoot that timeline a little forward, a little backwards. Around in that time.

And then what references that back to me, is I remember an article comes out -- I believe it's in the Journal of the American Medical Association - and specifically references West Virginia and specifically references Doctor Hall, who had been talking to us at these summits and identifying that patients are overdosing, and of course, as the coroner, they died, and they had prescription drug overdoses.

So it's in this time frame that I'm -- my mind is completely harkened to the understanding that there is a significant amount of medications which are being used in the nonmedical use and abuse. Somewhere in that time frame, that's what strikes me.

That prescription opioids for nonmedical use. Now, you know, forgive me for being completely naive -- I'm not. But you know,

here I am thinking about how I practice, how I teach at the medical school, what we teach residents and physicians, how it's properly done, and the concept that people are overdosing on prescription medications and they never even had a prescription.

Now, that strikes me in the mid 2000s. I probably shared that kind of thing. That -- plus reminds me, there's something else I shared in there -- I don't know.

That gets me to that pivot point of 2010. After that, I probably shared as a physician -- now I'm moving from my responsibilities as an academic physician organizing -- you know, organizational leadership of a department and physicians and pulmonologists and cardiologists and all that. I'm moving from that, away from that towards the Dean of the medical school, still attending --

And now what is then brought to my attention -- and again, another inflection point just for my own personal career. How it fits for the timeline of everything else, I can't particularly place for you.

That challenge, of decreasing harm to that addicted population, is enormous and has been the focus of the health department for several years and the reason for starting the Harm Reduction Program which is syringe-based, and a multitude of other services.

Adding to that the naloxone program.

That brings me to the significant burden of overdoses, nonfatal and fatal, in Cabell County. That is a significant burden. If we speak to the side, at least my brief summary on the side of opioid-related -- the nonmedical use of opioids related to dying, is the tragedies to families, to parents, to spouses, to siblings, to children from that.

The loss of economic value to that family, the tragedies, the psychosocial trauma, outcomes from that that will be borne out by this community for decades.

This will be generational for sure that that burden is upon this community.

When it comes to opioid -- nonmedical use opioid mortal -- I mean, morbidity, in addition to the things I've just spoken about there, we have

all the concerns about the treatment of pregnant mothers who are -- have addiction as a disease, their children, the neonatal absence syndrome burden that comes from that population.

The care of those women and their children after delivery. The -- and to put some touch points on that, that would be the Lily's Place and other organizations.

But in addition to that, is: What is going to be the economic and community burden of raising up those children, some of whom don't have families to raise them, some of whom will be in foster homes and the burden upon foster care.

What will be the outcome of those students who, in utero, were exposed to medications of abuse? And what's the burden as they move into the health -- into the primary education system? And all of those concerns.

That, clearly, is part of this as I see it.

Another burden would be: How do we organize properly platforms that would allow individuals to move into long-term recovery? How do we maintain them in long-term recovery? How are

numerous patients that are in that category of which this community is burdened in one way or another, many of them not having even coverage for the medical care that they're receiving.

What do we do when they transition out of that hospital? What do we do to get them back in long-term recovery?

Those are all part of what I see as the burdens of addiction.

So I see children, mothers, families, individuals in the -- and afflictions of their diseases.

I see the burden of the addicted population who are not in long-term recovery, the challenges that are faced by law enforcement and how that's managed and how that's an extreme economic burden and personnel burden upon law enforcement in this county.

I don't know. Counsel, I could probably go on. I don't know if I've answered your question.

Q. Yeah. I'm attempting, as a layperson, to get my arms around all of that which you've said. And one of the things that we'll be trying to use

personal experience and my experiences in the community around the time of late two thousand -- I'll take 2005 to 2010 or '11, my understanding is for reasons that I cannot completely define, there is a flood - that's my word, a flood - of opioid medications available to any number of peoples within any numbers of communities within Cabell County and Huntington.

And it is my understanding based on the literature and my exposure and interaction with people like the Huntington Police Department and people like Mr. Johnson to understand that around the same time that there was that unfortunate setting, heroin was introduced into this community.

And in fact, it would be my -- I would hold the understanding from the medical literature that the uptick in the use of heroin - not just in this community, but in general - began during the late two thousand -- 2008, '09, '10, and continued rapidly as we move from '10, '11, '12, '13 and '14.

I believe that there is a clear biologic plausibility, a clear biologic plausibility, to the transference of addiction to opioids and opiates - synthetic or otherwise - a

biologic plausibility that goes from my addiction to what originated as the nonmedical use of opioids, prescription opioids, to the use and abuse of other products, which would be the Schedule I nonmedical use of heroin, fentanyl, carfentanil, etc.

So in my mind, there -- I hold the opinion that there's a clear linkage between those two, and I support that from my experience, from my reading of the medical literature and from my experiences within the organizations that I've served.

That leads to me -- leads me to understand that but for the setting, the situation of this enormous amount -- in a sense, unrestricted pool of what I would have considered to be prescription opioids, but for that, I can't see why there would have been the use of heroin and the subsequent consequences of the burden -- and the burden of addiction and all the things that I've already articulated.

Q. So let me see if I can get a clean question and answer so that I can cite it in my response to summary judgment motions.

Do you believe there is a direct causal relationship between prescription opioid addiction and abuse and the initiation of heroin use?

MR. SALIMBENE: Object to form.

A. Yes.

Q. Do you believe that prescription opioid addiction and abuse is a primary gateway to heroin use?

MR. SALIMBENE: Object to the form.

A. Yes.

Q. Do you believe that prescription opioid addiction and abuse is also a primary gateway for methamphetamine use?

MR. SALIMBENE: Object to form.

A. Yes.

Q. So --

MR. FARRELL: That's all I've got. Thanks, Doc.

MR. SALIMBENE: My turn again, Paul?

MR. FARRELL: Yep, he's all yours.

MR. SALIMBENE: Okay, thank you. And thank you for sticking to the 30 minutes. I appreciate that.

EXAMINATION